CLINTON WIRE LATH

MAINE
MEMORIAL
CHAPEL

ERNEST FLAGG, NEW YORK
Architect

NOEL CONSTRUCTION CO., BALTIMORE
Builders

OLIVER & BURR
Contractors for Furring and Lathing

INTERIOR OF MEMORIAL HALL, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MD.

All plastering in this, as well as in all of the other new buildings of the United States Naval Academy, at Annapolis, Md., done on the Clinton Wire Lath.

CLINTON
WIRE LATH

Descriptions
Specifications
Applications

CLINTON
WIRE CLOTH
COMPANY
CLINTON, MASSACHUSETTS

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CLI

INTRODUCTION

Superiority of Wire Lath

Wood lath in a great measure has enjoyed one advantage—low first cost. The rapidly mounting prices of all classes of lumber have removed even this advantage. The very slight difference between the present cost of wood and wire lath leaves no excuse for using the former even for the most inexpensive building. Wire lath never swells and cracks the plaster as wood lath does. Wire lath, when imbedded in plaster, is one of the best of fire-resisting substances. Use wood lath and the walls become the best possible fuel for any fire. Iron furring and wire lathing for plain and ornamental plaster work afford the architect opportunity for original and decorative effects in interior finish which were well-nigh impossible to secure in the days of wood lath.

Artistic results achieved with Wire Lath

Formerly when the attempt was made to secure artistic effects it was accomplished by using wooden brackets sawed to the outline of the molding. This was at best heavy, cumbersome and dangerous construction. The general public little realizes when looking at the splendid ornamental effects of the ceilings of our banks, libraries, theaters, depots and residences that the massive beam or arch or cornice that looks so great as to be almost dangerous, suspended so far above, is in most of its area about one inch in thickness and weighs on an average about 11 pounds to the square foot. No contrast could be more striking than the illustrations of the Memorial Hall in the new United States Naval Academy, at Annapolis, one showing the web-like lightness of Clinton wire lath and its supports, the other the massive dignity of the finished exterior. In that very lightness lies the greatest strength of the Clinton wire lath system.

Freedom from bulging or sagging of Wire Lath

Another point of the utmost importance, and perhaps its chief source of superiority, is the total freedom of Clinton wire lath from bulging or sagging, and the consequent cracking of the plaster. This immunity is due to the V stiffening in the lath, placed crosswise in the fabric every eight inches and attached by means of metal clips. In applying the plaster the toe or heel of the plasterer's trowel—the standard length of which is $10\frac{1}{2}$ inches—is always on one of the stiffening ribs. It

will be readily seen that it is impossible for the plasterer to push back the lath while applying the plaster and afterwards causing it to bulge or sag, a fertile source of cracking plaster in other lathing systems.

The opinion of an authority about Wire Lath

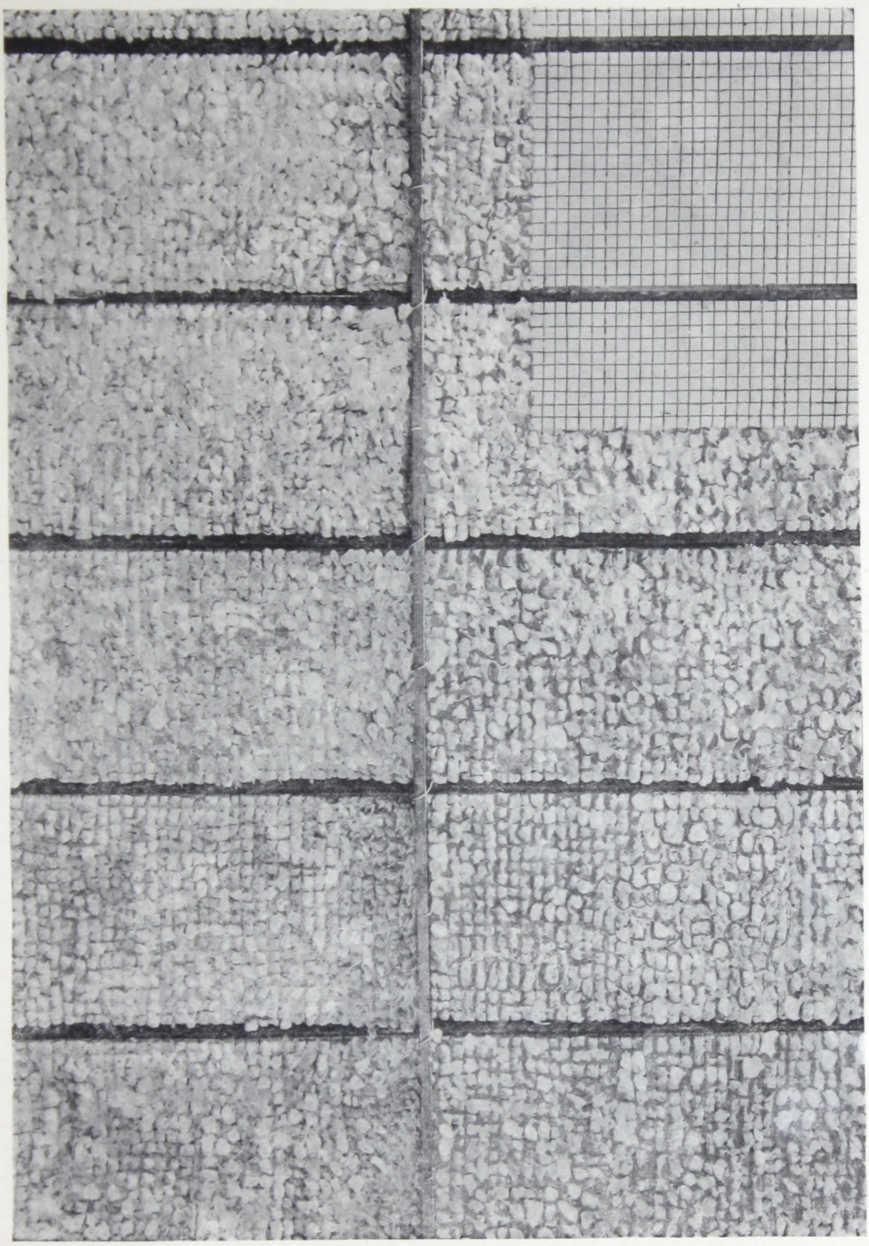
The late Frank E. Kidder, in his "Architect's and Builder's Pocket-Book," summed up the matter when he stated: "Heavy wire cloth tightly stretched over metal furrings forms the most fireproof lath now on the market," and he had personally seen it demonstrated by severe experimental tests and by actual fires in buildings that plaster on wire lath, and particularly hard plasters, will protect the woodwork from a severe fire as long as the plaster remains intact, provided there are no loop-holes or cracks at the corners and columns where the fire can get through. He further states that no metallic lath is fireproof which does not in use become imbedded in the mortar, for, if the thin coating of plaster peels off, the metal lath will not resist the fire any more than wood lath.

Necessity for completely imbedding lath in plaster

While plaster is one of the best non-conductors of heat in existence, metal, on the other hand, is, of course, a conductor, and its expansion, whenever heated, will disintegrate the keys of the plaster and leave holes through which a fire may spread. Therefore, the less metal there is in the lath and the more perfectly it is imbedded in the plaster, the less the latter can be damaged by any action of heat upon the supporting metal. In order to obtain the best possible conditions for fire-proofing it is *necessary* for the mortar to control the foundation on which it is plastered.
Wire lath is the only form of metal lath meeting this requirement, as the plaster in contracting carries with it the wire in the lath, whereas a sheet metal lath *expands* when heated, while the mortar *contracts*, thus necessarily causing the mortar to separate from the lath. Sheet metal lath and also tiles prevent the egress of steam which gets between the plaster and its foundation and dislodges the plaster. In every one of the metal lath systems now on the market more or less of the metal is directly exposed. The wire lath system is the only one in which absolutely no metal is exposed.

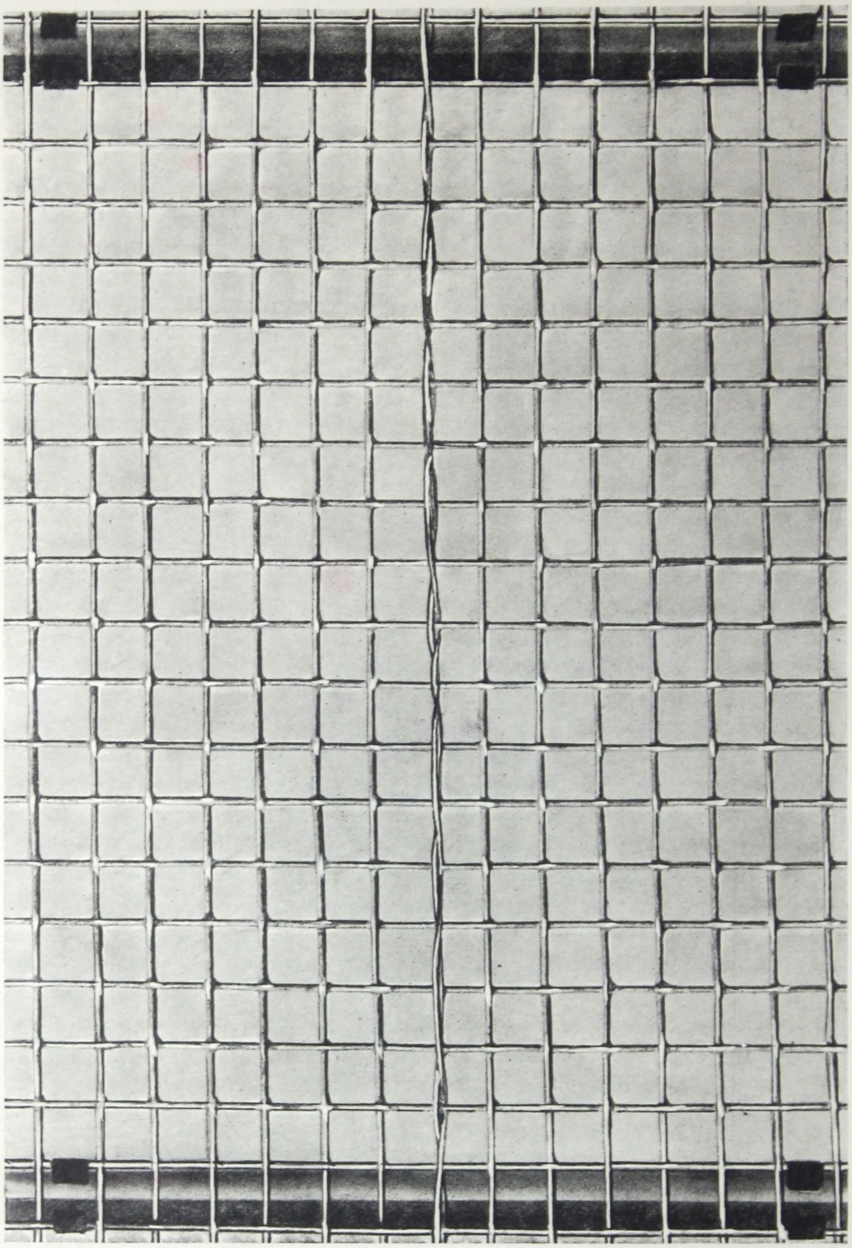
Difference in the imbedding of metal and Wire Lath

A glance at the key-side of a wall plastered on wire lath and one plastered on the ordinary metal lath will show the great difference in fire-proofing qualities. In the case of wire lath it is well-nigh impossible to detect a single strand of the wire, so perfectly is it imbedded in the plaster. The metal lath, on the other hand, is exposed to the action of fire and rust.



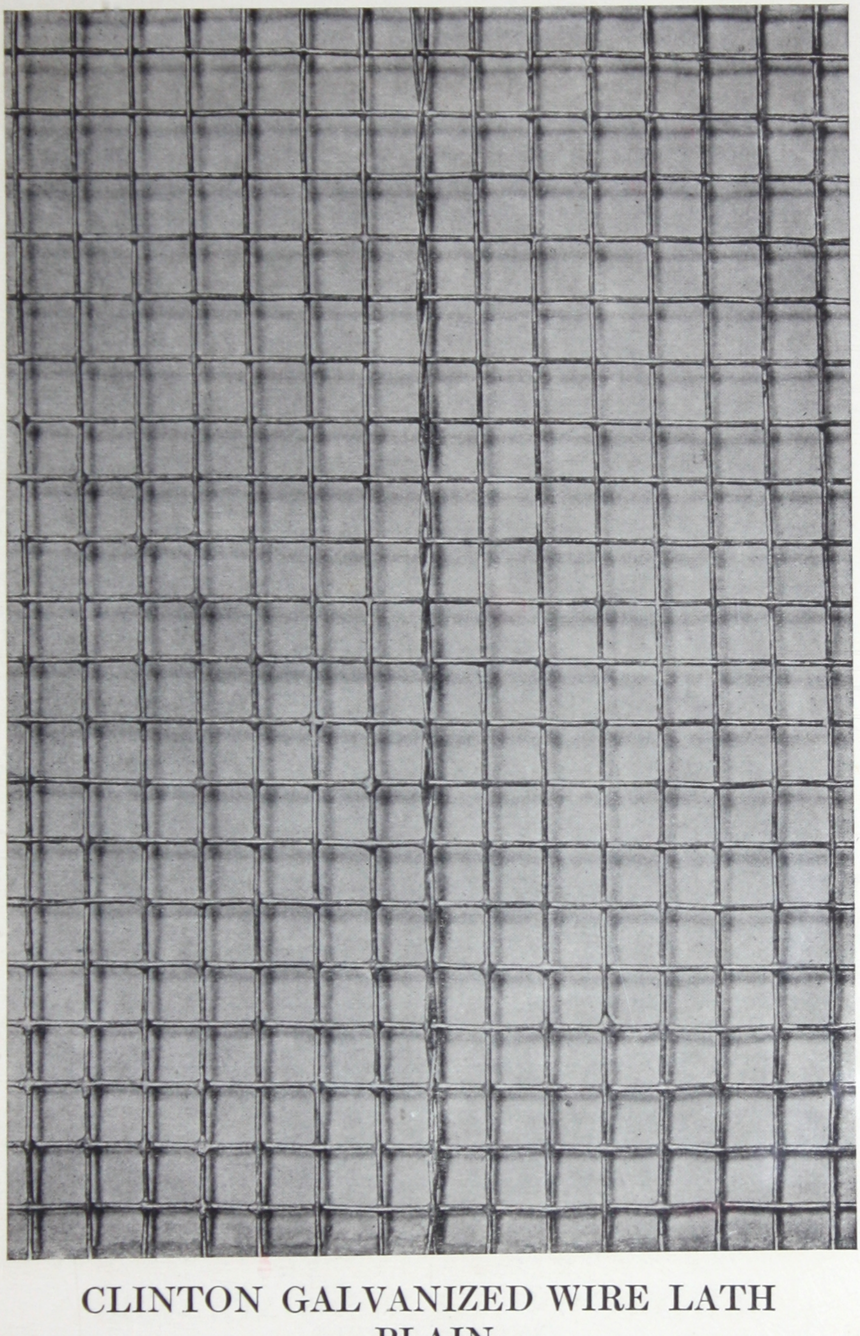
THE KEY OF WIRE LATH

Rear view of section of wall plastered on V-Stiffened Clinton Wire Lath, showing how perfectly this lath is embedded in the body of the plaster.



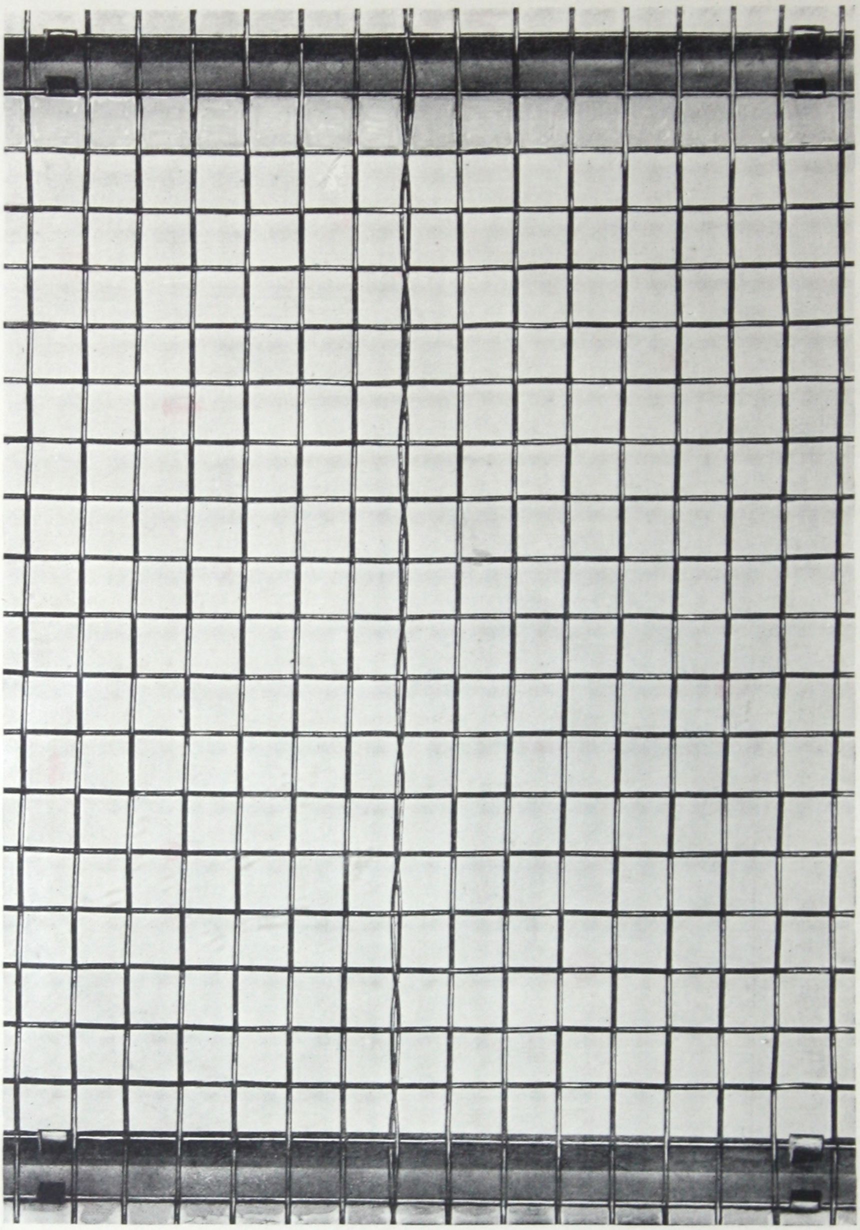
CLINTON V-STIFFENED GALVANIZED WIRE LATH

This material is made in 18 to 21 gauge wire, inclusive, 2 1-2 meshes to the inch, and is furnished in rolls 100 feet long, 32 and 36 inches wide.



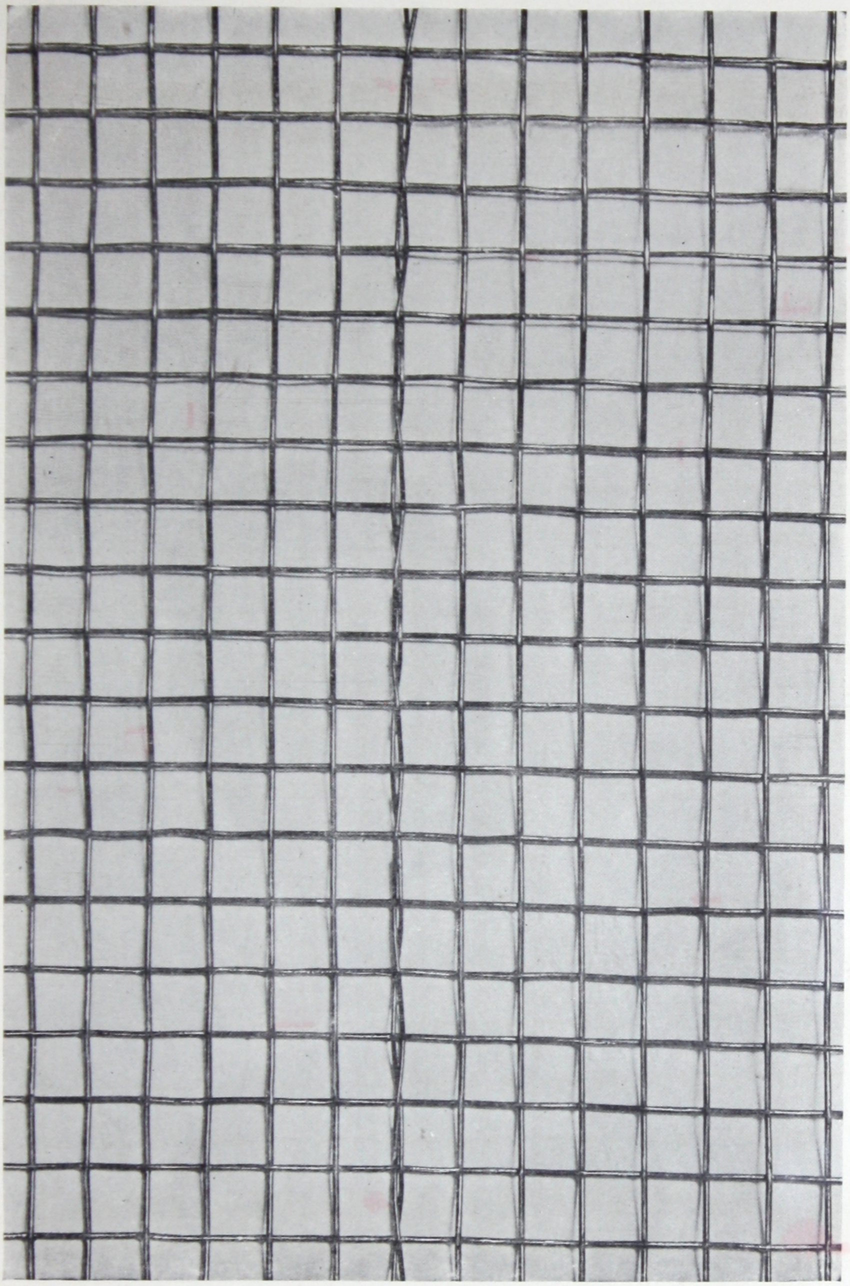
CLINTON GALVANIZED WIRE LATH
PLAIN

This is made in the same meshes and widths as the lath shown on the opposite page, and in the same gauges of wire. It is furnished in rolls 200 feet long.



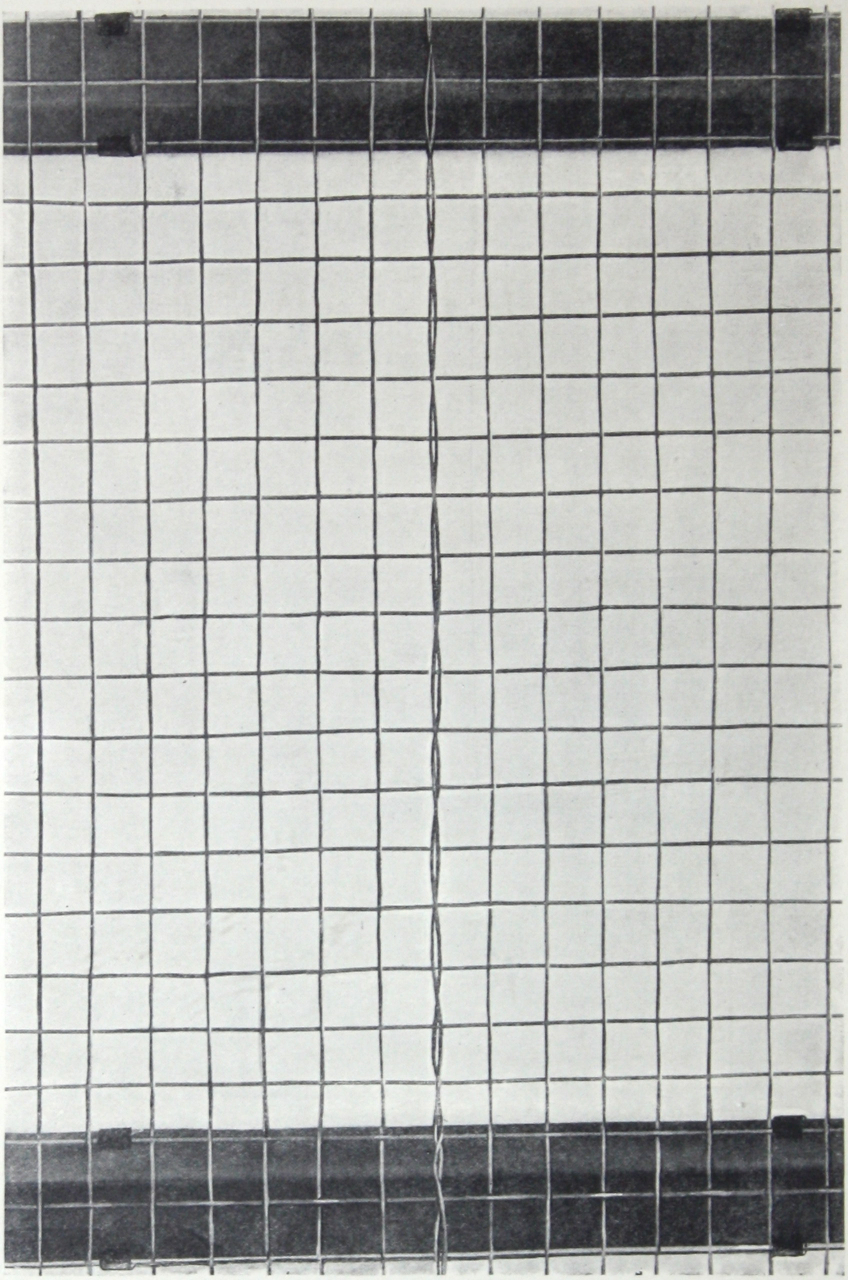
CLINTON V-STIFFENED JAPANNED WIRE LATH

This material is made in 18 to 21 gauge wire, inclusive, 2 1-2 meshes to the inch, and is furnished in rolls 100 feet long, 32 and 36 inches wide.



CLINTON JAPANNED WIRE LATH
PLAIN

This is made in the same meshes and widths as the lath shown on the opposite page, and in the same gauges of wire. It is furnished in rolls 200 feet long.



CLINTON 1″ V-STIFFENED WIRE LATH
FOR EXTERIOR WALL FURRING

This material is made in 18 to 21 gauge wire, inclusive, 2 1-2 meshes to the inch, and is furnished in rolls 100 feet long, 32 and 36 inches wide.

SPECIFICATIONS

for

MORTAR TO BE USED ON WIRE LATH

In offering the following specifications to its customers, the Clinton Wire Cloth Company desires to recommend not only the strongest and cheapest mortar for use in plastering, but the safest as well.

They embody the results of long experience, close observation and of exhaustive tests of standard patent plasters and of a plaster mixed according to our specifications, conducted by Professor Ira H. Woolson, at Columbia University, New York.

The specimens tested, consisting of eight samples each of two standard patent plasters, and eight samples of plaster mixed according to our specifications, were a little over a year old and had been subjected to the most adverse atmospheric conditions, both moist and dry.

In his report, after describing the behavior of the samples under the breaking, hammer, fire, and water tests, Professor Woolson concludes by saying:

> "From a careful investigation of the condition of the specimens previous to tests, and a comparison of the results of the various tests, I am fully convinced that the mixed plaster (Clinton specification) is in every respect the superior of the three.
>
> "Further, the condition of the specimens before the test was very instructive. The samples of mixed plaster (Clinton specification) were firm and rigid in every way, irrespective of whether they had received the moist or dry treatment."

Attention is directed to the photograph on page 15 showing the method used for the breaking test.

The lime and sand mortars specified on page 16 should be allowed to stand for at least a week before using.

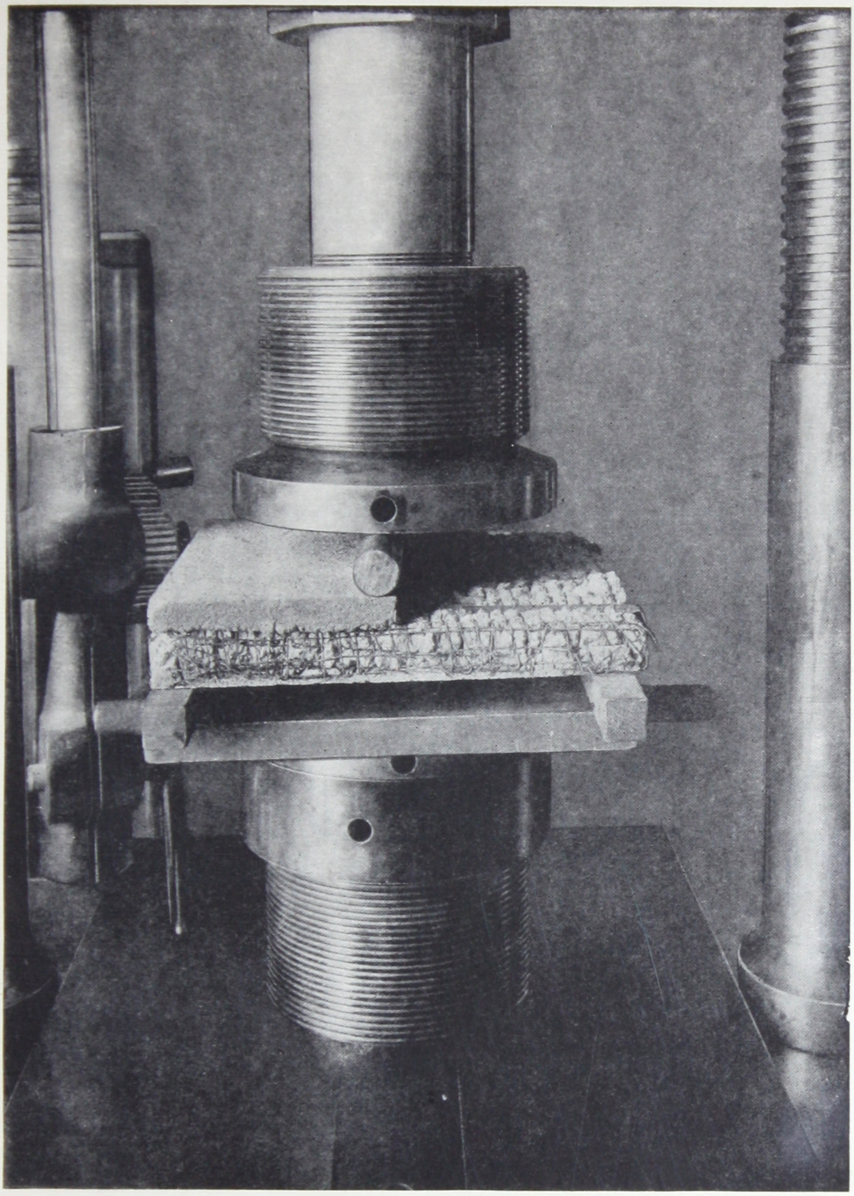
After the scratch coat has set firmly but before drying, the second, or brown coat should be applied, for the reason that the bond between the two coats will be found to be much firmer when one coat follows the other in a moist condition.

Mortar prepared according to our specifications will be found to be not only stronger than any other, but, in addition, an actual saving in the amount of mortar used in the building will be effected. Wherever the quick, hard-setting plasters are used, the amount of waste is an important item. Since the plaster in which gypsum is used as a base will not stand

retempering, the droppings from the plasterers' trowels cannot be regauged without creating soft and weak spots throughout the plastering.

While these defects may not be readily detected, they exist nevertheless and will become manifest sooner or later. This danger can, however, be easily avoided by using Portland cement as a gauging. Although it sets slowly and while the condition is not improved by retempering, yet it is well known that Portland cement gauged mortar can be retempered with the freshly gauged mortar without injuring the quality of the plaster to any appreciable extent.

For plastering surfaces adjacent to moisture, in kitchens, bath rooms and basements, the mortar which we have specified is the only one actually fit for use; certainly the only mortar increasing in quality with age, rather than deteriorating, as developed by Professor Woolson's tests



TESTING CLINTON PLASTER

Machine used by Professor Woolson and referred to in his report on the breaking test of plaster mixed according to the Clinton specifications.

SPECIFICATIONS

for

PLASTERING ON PLAIN AND STIFFENED WIRE LATH ATTACHED TO STEEL OR WOODEN SUPPORTS FOR SIDE WALLS AND PARTITIONS

SCRATCH COAT: One part of lime, 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime.

GAUGING: $4\frac{1}{2}$ parts of the above mixture of mortar to one part of Portland cement.

BROWN COAT: One part of lime to 15 parts of sand.

GAUGING: Same materials and proportions as for scratch coat.

For PLASTERING ON CEILINGS

SCRATCH COAT: One part of lime, 10 parts of sand and $1\frac{1}{2}$ pounds of cocoanut or manilla fiber to each barrel of lime.

GAUGING: $4\frac{1}{2}$ parts of mortar to one part of Portland cement.

BROWN COAT: One part of lime to 15 parts of sand.

GAUGING: Same materials and proportions as for scratch coat.

For PLASTERING ON SOLID FILLED PARTITIONS

BROWN COAT: One part of lime to 15 parts of sand.

GAUGING: $4\frac{1}{2}$ parts of mortar to one part of Portland cement.

For PLASTERING ON SOLID PARTITIONS

SCRATCH COAT: One part of lime, 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime.

GAUGING: $4\frac{1}{2}$ parts of mortar to one part of Portland cement.

BROWN COAT: One part of lime to 15 parts of sand.

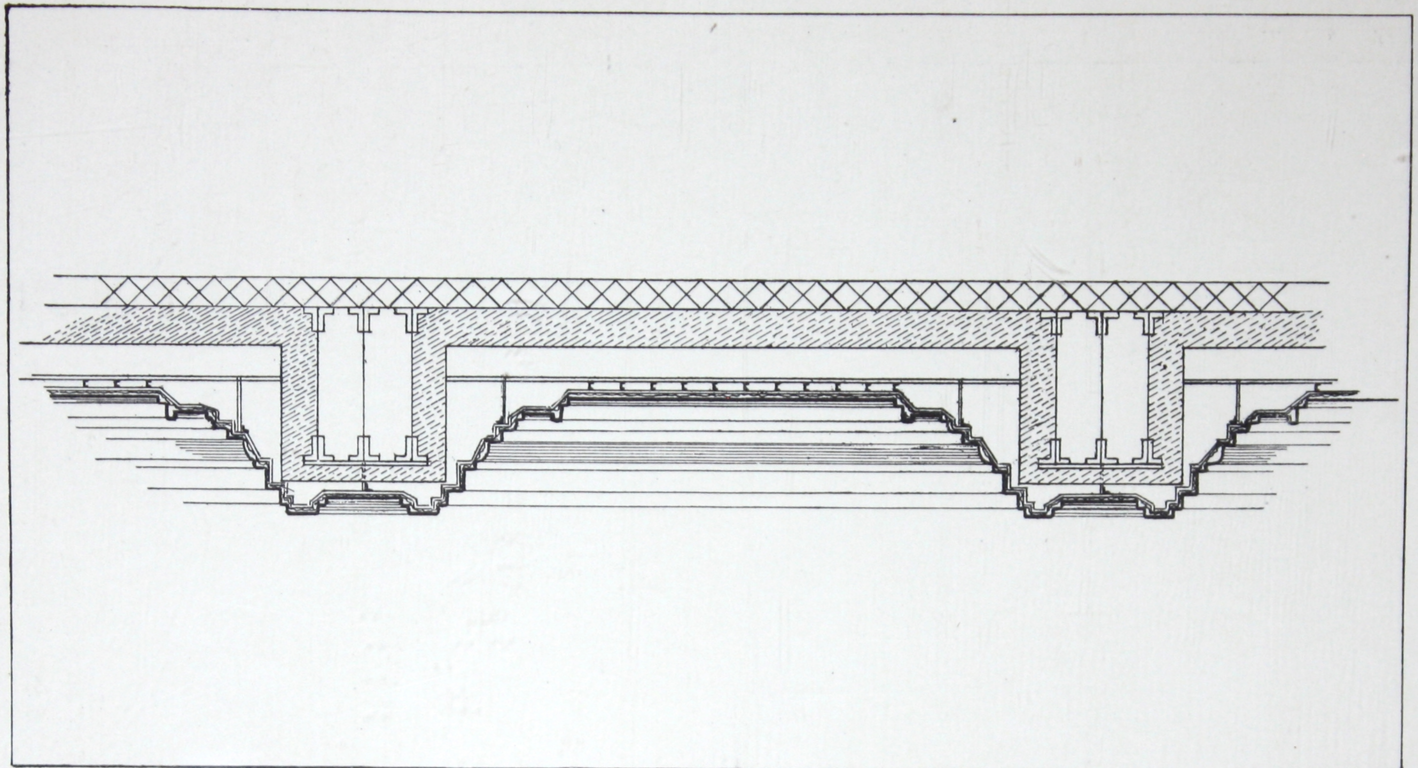
GAUGING: Same materials and proportions as for scratch coat.

For PLASTERING EXTERIORS

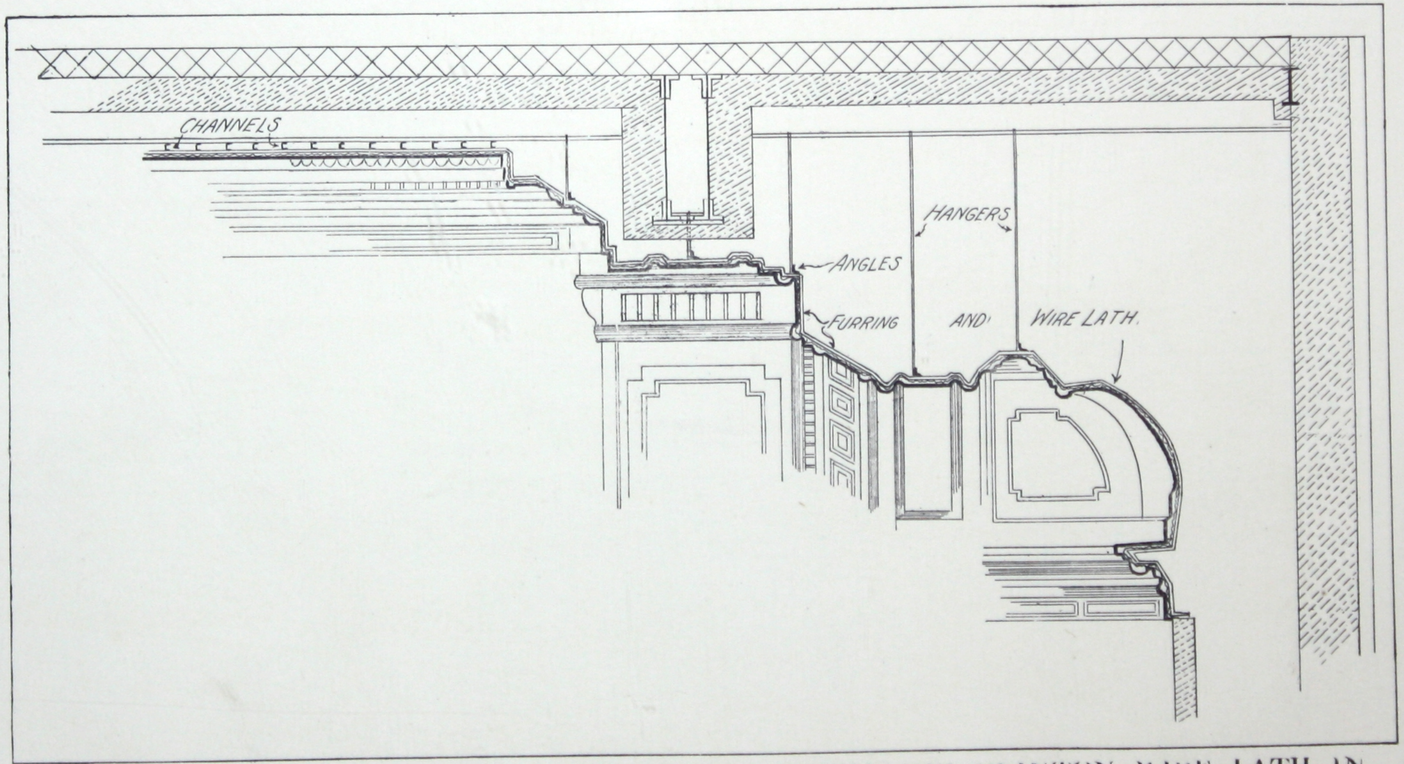
SCRATCH COAT: One part of lime to 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime.

GAUGING: 3 parts of mortar to one part of Portland cement.

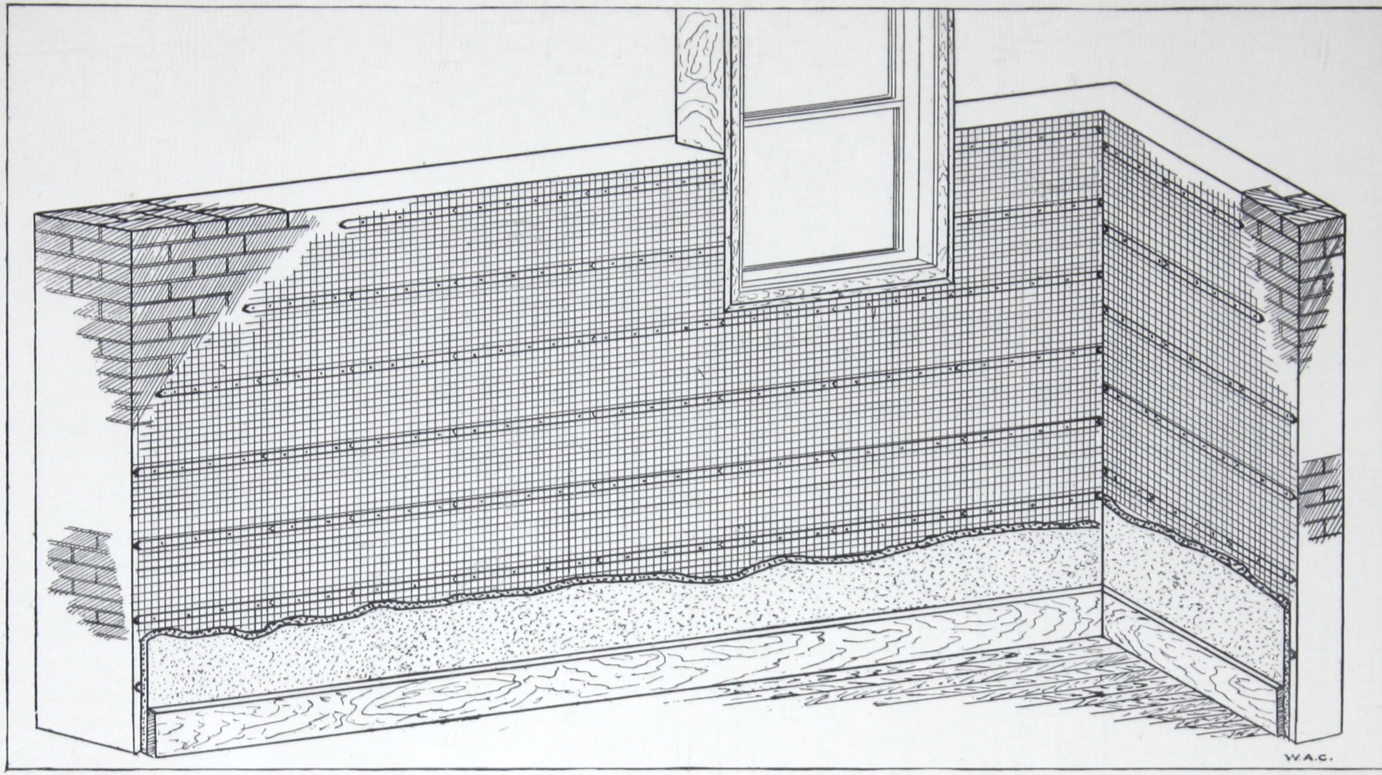
BROWN OR FINISHING COAT: 3 parts of sand or crushed granite to one part of Portland cement.



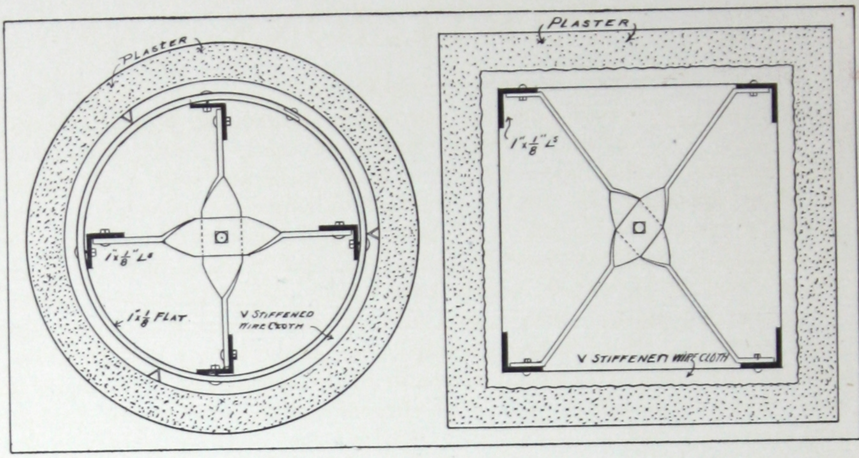
PERSPECTIVE SKETCH SHOWING THE METHOD EMPLOYED IN INSTALLING CLINTON WIRE LATH IN DECORATIVE CEILING WORK



PERSPECTIVE SKETCH SHOWING METHOD FOR INSTALLING CLINTON WIRE LATH IN DECORATIVE CORNICE WORK



METHOD FOR INSTALLING CLINTON WIRE LATH ON EXTERIOR WALLS



METHOD FOR ERECTING FALSE COLUMNS

False Columns For architectural effect it is necessary, in many buildings, to use false columns and pilasters. This class of construction must not alone be ornamental, it must be light and strong as well. The method shown in the illustration answers these requirements and is besides easily carried out. Care must be taken to have the braces and vertical furring bolted together so that the column, before plastering, is shown to be strong and not wholly dependent upon the plastering for its quality. It is a fact that good plastering put on an indifferent background of lathing will often pass close inspection, but if both plastering and lathing are of inferior quality or workmanship trouble begins. Usually, where two contractors are employed for the work, both must pay the penalty, which is not always a pecuniary loss but often means the discrediting of a first-class system. For this reason, we ask architects to insist on having this class of work bolted together instead of tied with wire, and we are confident that the result will justify our judgment in the matter.

PARTITIONS

Solid

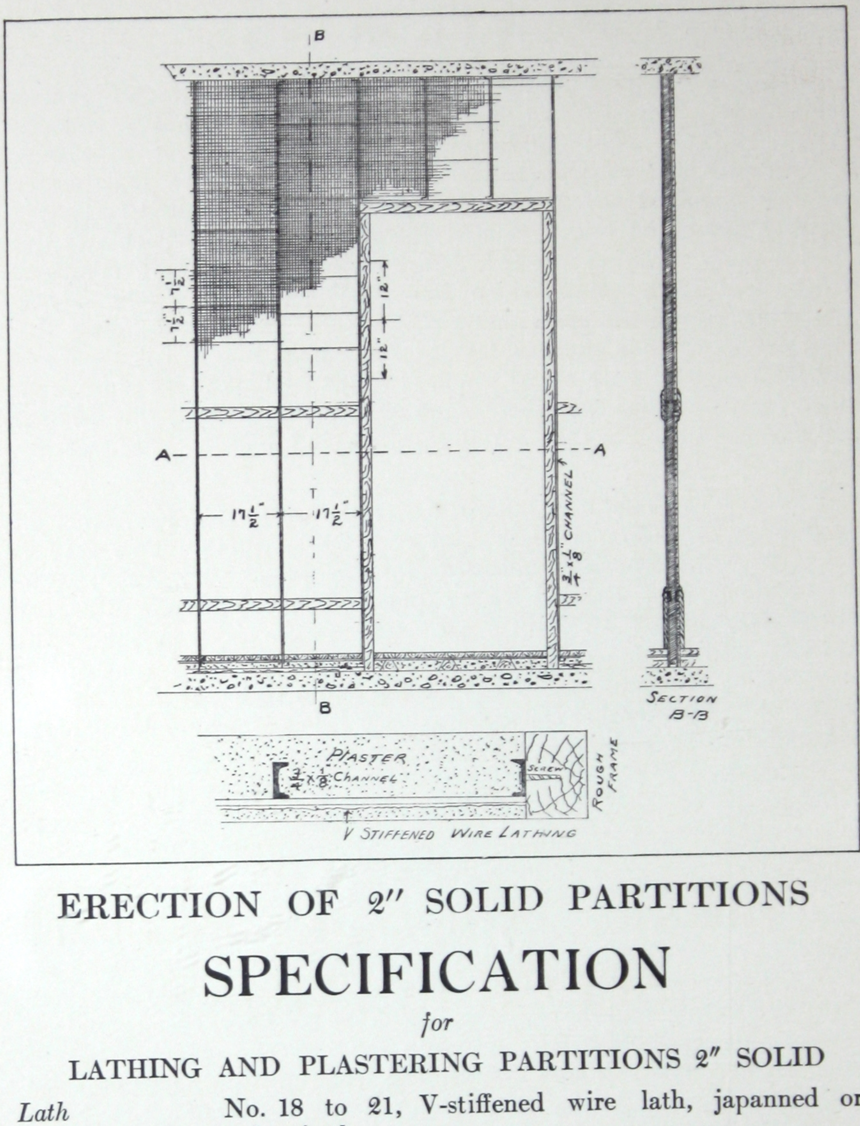
The lightest, strongest and most thoroughly fireproof partition for use in residences, hotels, schools, office buildings, hospitals, and, in fact, all classes of structures, is the light channel or angle iron and lath and plaster partition specified by us. A distinct advantage possessed by this partition lies in its thickness, 2″ being usually specified. This is the most sanitary partition erected, being absolutely close and compact. When used in hospitals where base, door and window trim is run in cement or plaster, with angles and corners rounded, it forms the ideal partition. For kitchens, laundries and toilet rooms it is the best, and for the small extra outlay required in the erection of a residence or other form of structure, where wood construction is used, this feature will commend itself to the careful architect and builder. See Specifications.

Hollow

The illustration shows the method for erection of channel, lath and concrete partition. This type is especially adapted for use in a very heavy class of buildings, the channel being placed about 18″ on centre and ribbed lath placed on both sides. The centre is then filled with concrete and, after setting, both sides plastered. This construction forms much the strongest of any of the 4 to 6 inch partitions erected in any building, no other construction used being so firm and capable of resisting pressure and the action of fire.

The channel or angle hollow partition, lathed on both sides and plastered, can be made on so many different lines that architects select it where walls vary in thickness and where the wall line is much broken up by pilasters, curved surfaces, niches, etc.

The objection has been general that this and the 2″ solid partition are not sound proof. No greater error can be made and none more easily corrected. When a solid or a hollow partition of this character is plastered from ceiling to floor it will be found sound proof. The trouble has been with the plasterer and the inspector. With the plasterer, because he has not done his work properly, and, with the inspector, because he has stood for it. Under all base grounds this work must be plastered solid to the floor, not a light scratch coat on one side, but the full thickness of the 2″, and flush, with base ground, on both sides of the hollow. Partitions done according to this plan will be found to be as sound proof as any ever erected.



ERECTION OF 2″ SOLID PARTITIONS

SPECIFICATION

for

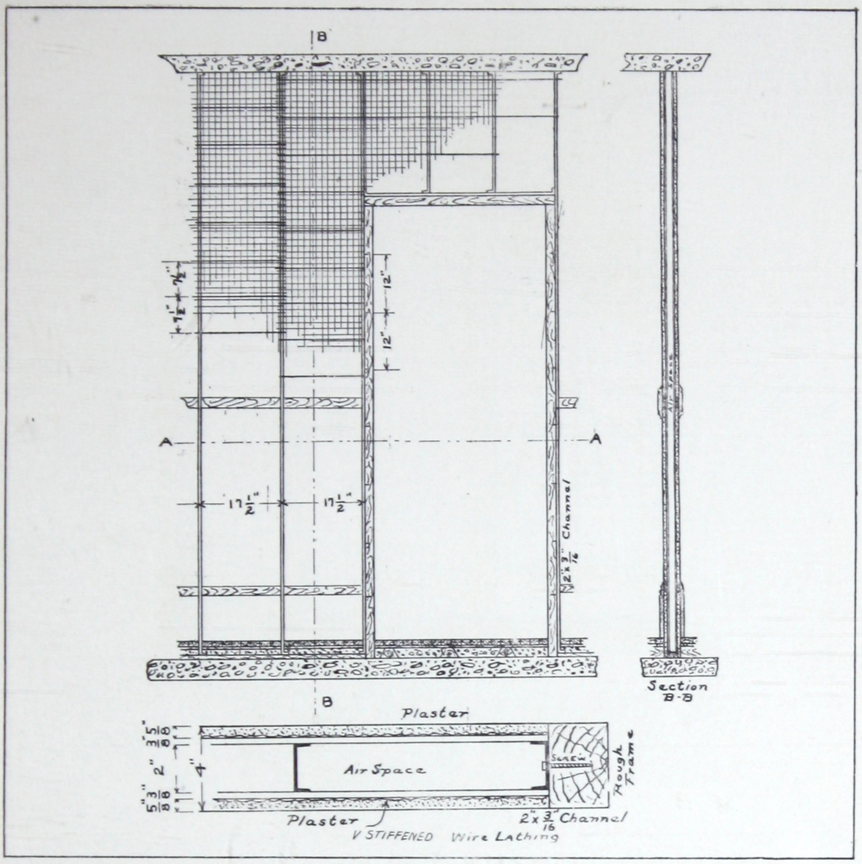
LATHING AND PLASTERING PARTITIONS 2″ SOLID

Lath — No. 18 to 21, V-stiffened wire lath, japanned or galvanized.

Tie Wire — No. 18 galvanized.

Studding — $\frac{3}{4}$″ Channel iron, spaced 12″ or 18″ on centers and connected by clips or bolts at top and bottom.

Plastering — Scratch coat: one part of lime, 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime. Gauging: 4 1-2 parts of mortar to one part of Portland cement. Brown coat: one part of lime to 15 parts of sand. Gauging: same materials and proportions as for scratch coat.



ERECTION OF HOLLOW PARTITIONS

SPECIFICATIONS

for

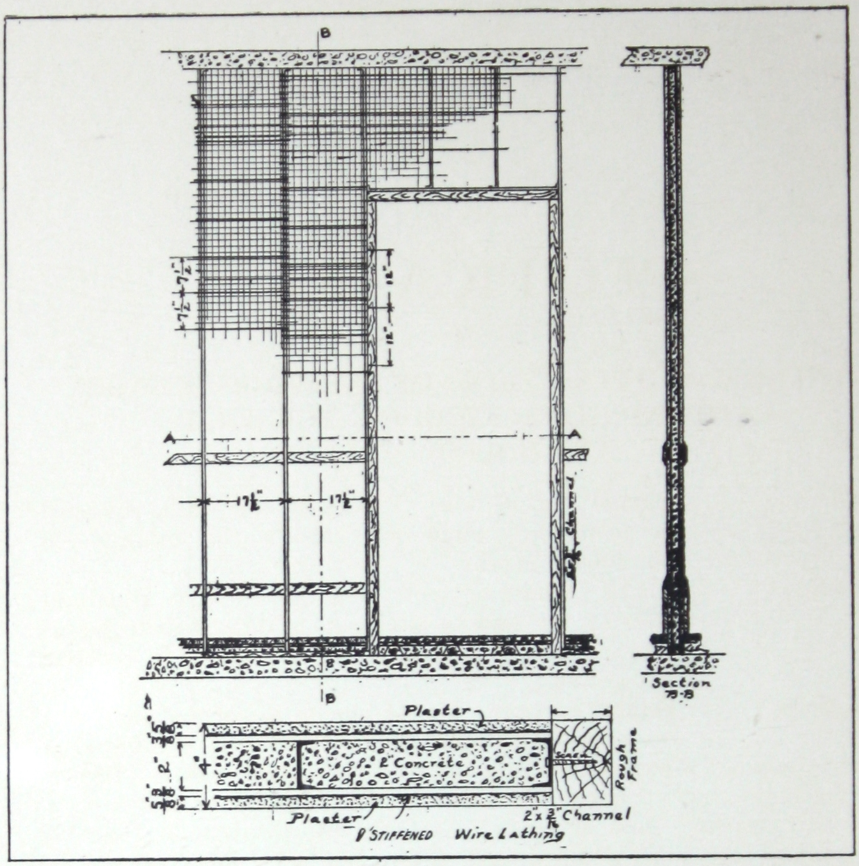
LATHING AND PLASTERING HOLLOW PARTITIONS

Lath No. 18 to 21 gauge, V-stiffened wire lath, japanned or galvanized.

Tie Wire No. 18 galvanized.

Studding To be determined by thickness of partition desired.

Plastering Scratch coat: one part of lime, 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime. Gauging: 4 1-2 parts of mortar to one part of Portland cement. Brown coat: one part of lime to 15 parts of sand. Gauging: same materials and proportions as for scratch coat. Place lath on both sides of studding and use plaster specified above.



ERECTION OF SOLID FILLED PARTITIONS

SPECIFICATIONS

for

LATHING AND PLASTERING SOLID FILLED PARTITIONS

Lath Gauges No. 18 to 21, V-stiffened wire lath, japanned or galvanized.

Studding To be 2″ to 4″ channel iron, 12″ to 18″ on centers, lathed on both sides and filled with concrete.

Filling One part of Portland cement, 2 parts of sand, 5 parts of cinders. After concrete has set, partition to receive one coat of plastering on each side. This coat is to consist of one part of lime to 15 parts of sand. Gauging: 4½ parts of mortar to one part of Portland cement.

SPECIFICATIONS

for

LATHING AND PLASTERING OF EXTERIORS ON WIRE LATH AND STEEL STUDDING FOR SOLID AND HOLLOW WALLS

Lath Gauges No. 18 to 21, V-stiffened wire lath, japanned or galvanized, wired over each V rib, using No. 18 galvanized tie wire.

Studding To be channel or angle iron, attached to structural steel at top and to steel girts at intermediate points connecting bottom to angle, or imbedding in concrete foundation.

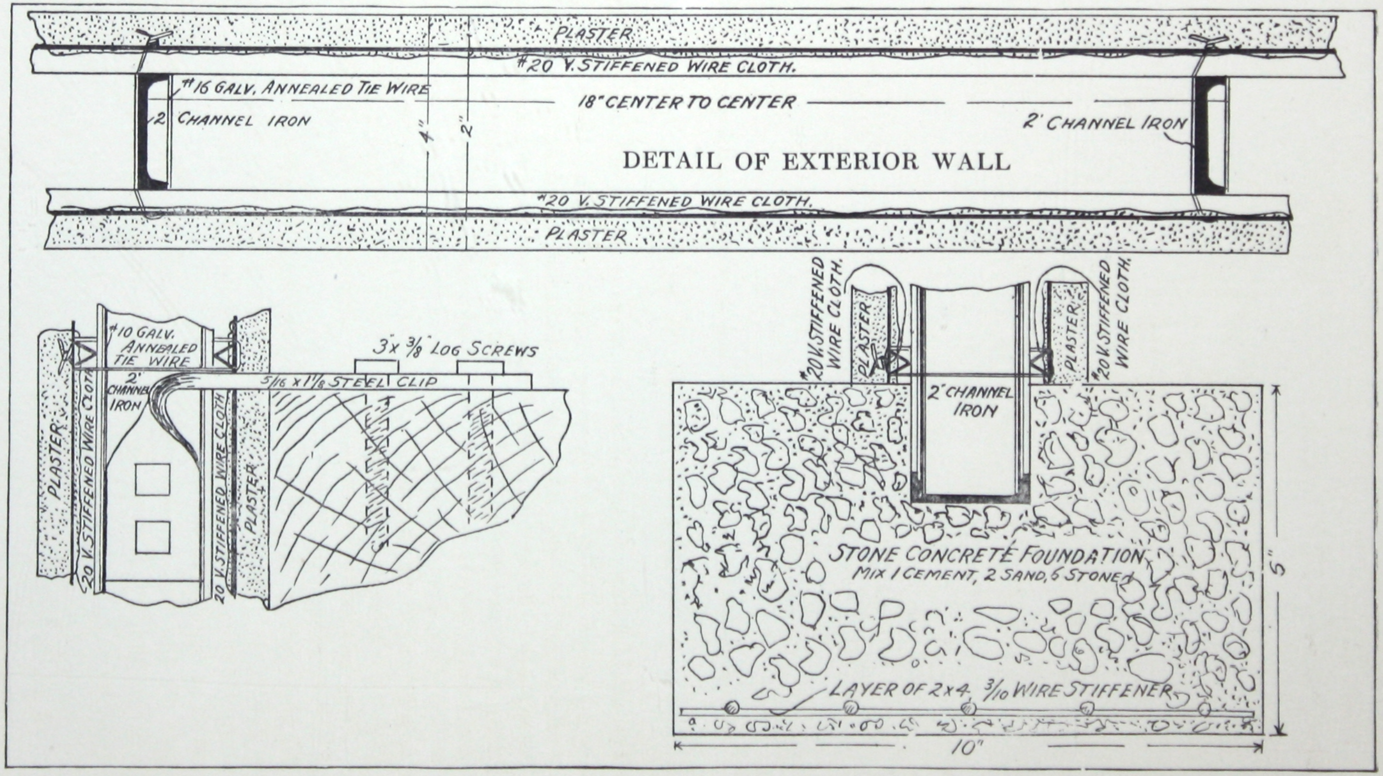
Plastering Scratch coat: one part of lime to 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime. Gauging: 3 parts of mortar to one part of Portland cement. Brown or finishing coat: 3 parts of sand or crushed granite to one part of Portland cement. First or scratch coat over lathed side to be followed by a filling coat, so as to imbed steel studs; then a leveling coat to be added on both sides, and floated, or otherwise treated to show finish. For hollow walls the lath will be placed on both sides of studding, and the same mortar as specified above will be used on exterior.

ON WOOD STUDDING OR SHEATHING

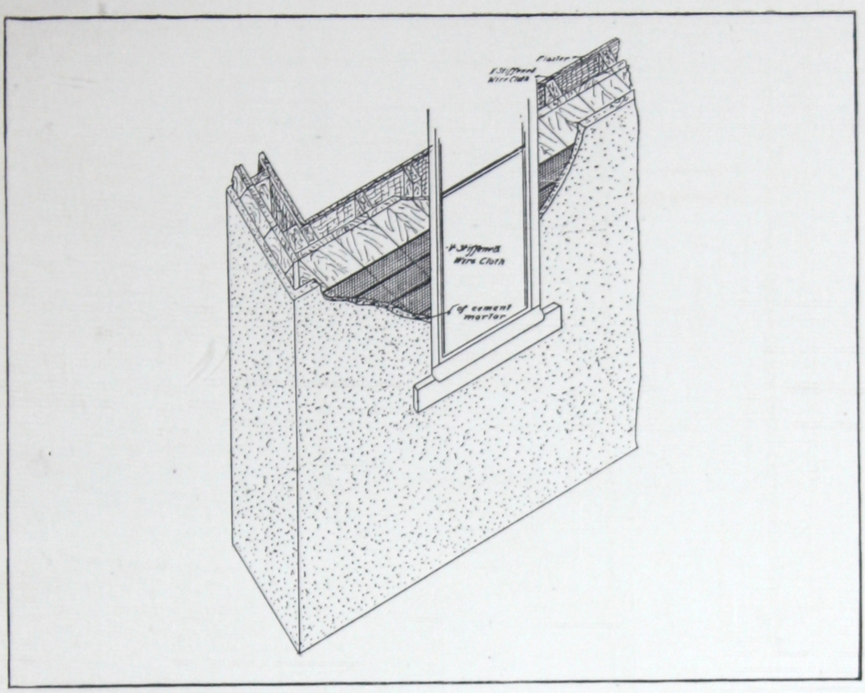
Lath Gauges No. 18 to 21, V-stiffened wire lath, japanned or galvanized.

Staples 1″ or 1¼″ galvanized wire placed over each V rib.

Plastering Scratch coat: one part of lime to 15 parts of sand and one pound of cocoanut or manilla fiber to each barrel of lime. Gauging: 3 parts of mortar to one part of Portland cement. Brown or finishing coat: 3 parts of sand or crushed granite to one part of Portland cement. This finish may be pebble dash, stippled, or otherwise roughened, in which case the pebbles must be dashed into the mortar immediately after the second coat is laid on. The second coat must follow the first before the latter is dried out.



METHOD FOR CONSTRUCTING HOLLOW EXTERIOR WALLS

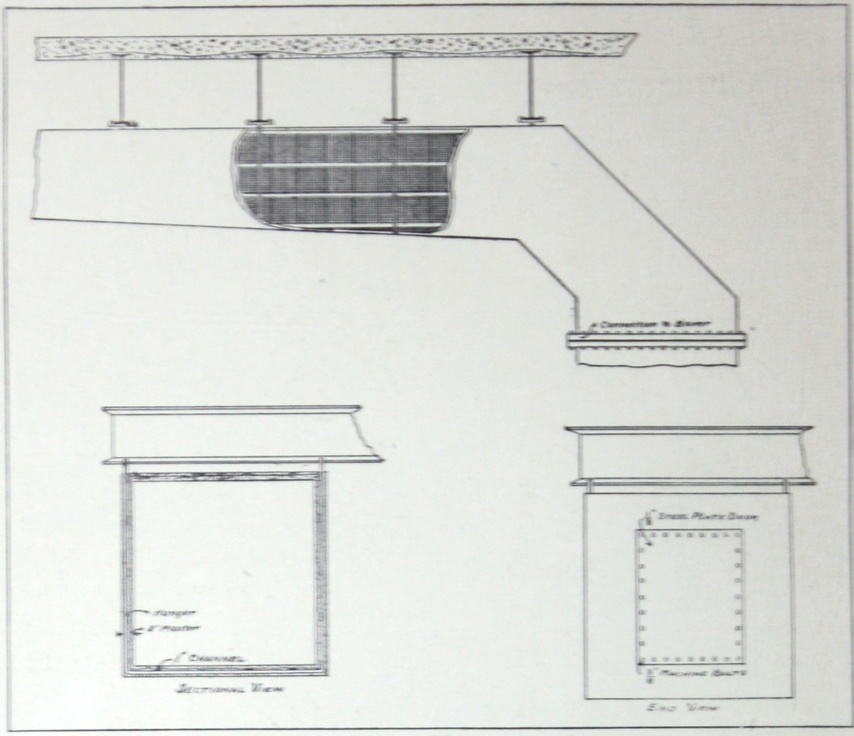


EXTERIOR WALLS

The adaptability of wire lath has become so varied that anything new is no longer a matter of surprise. Buildings of all kinds, from the summer cottage to the immense manufacturing plant, are inclosed with wire lath, attached to some form of wood or steel studding, and plastered in various styles. The coolest dwelling in summer and the warmest one in winter is the one the interior and exterior walls of which are lathed with wire lath and plastered in the proper manner. Extra care is required along the eastern seaboard, to have the exterior so plastered that the action of the atmosphere will not disintegrate the plastering. This is easily accomplished by adhering to the specifications under the heading of lathing.

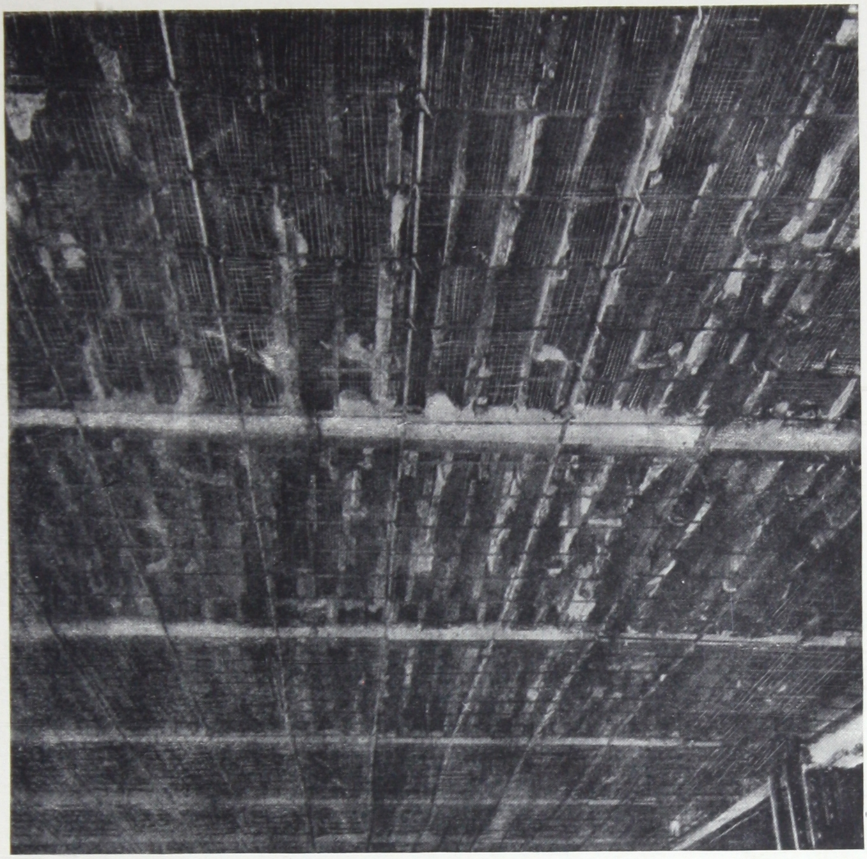
For the exterior walls of manufacturing plants, foundries, train sheds, repair shops, etc., the lightest, closest, cheapest and best wall in use at the present time is that constructed on the lines laid down by us and described in our specifications.

This class of wall, as executed for the Manhattan Elevated R. R., at 128th Street and 2nd Avenue, New York, is adaptable to any building of this class.



METHOD FOR CONSTRUCTING FORCED AIR DUCTS

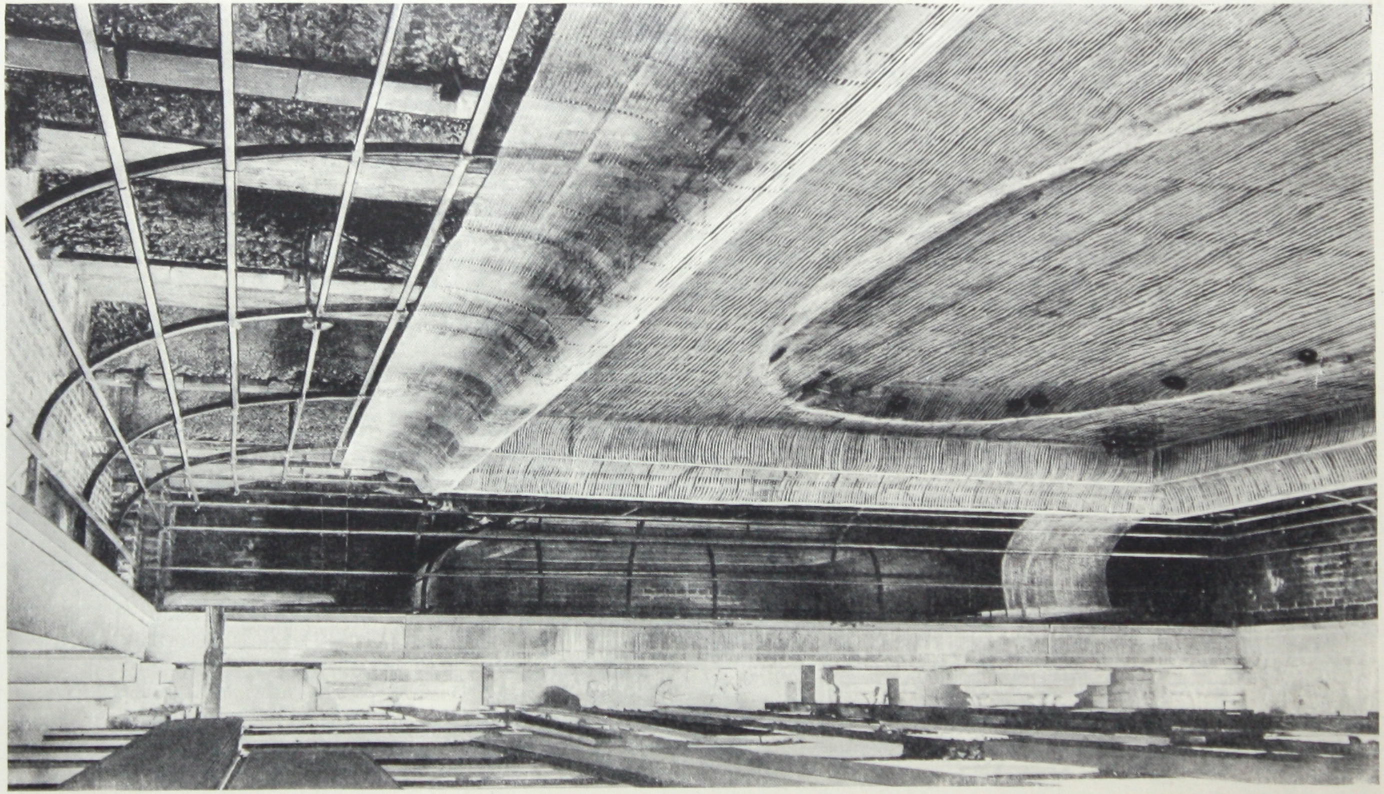
Air Ducts The illustration shows a type of forced air duct constructed at the power-house of the Manhattan Elevated Railway, 74th Street and East River, New York, as well as in every sub-station of the same system. It was also constructed in the main power-house of the New York Edison Company, 38th Street and First Avenue, New York. This duct is an improvement over the sheet or steel plate duct, in that it can more easily follow any line or curve. In addition to being noiseless, connections to fans and transformers are also more easily made. The method of construction is simple and rapid. We invite the attention of electrical engineers to this class of work and assure them of the good qualities of ducts built according to this method.



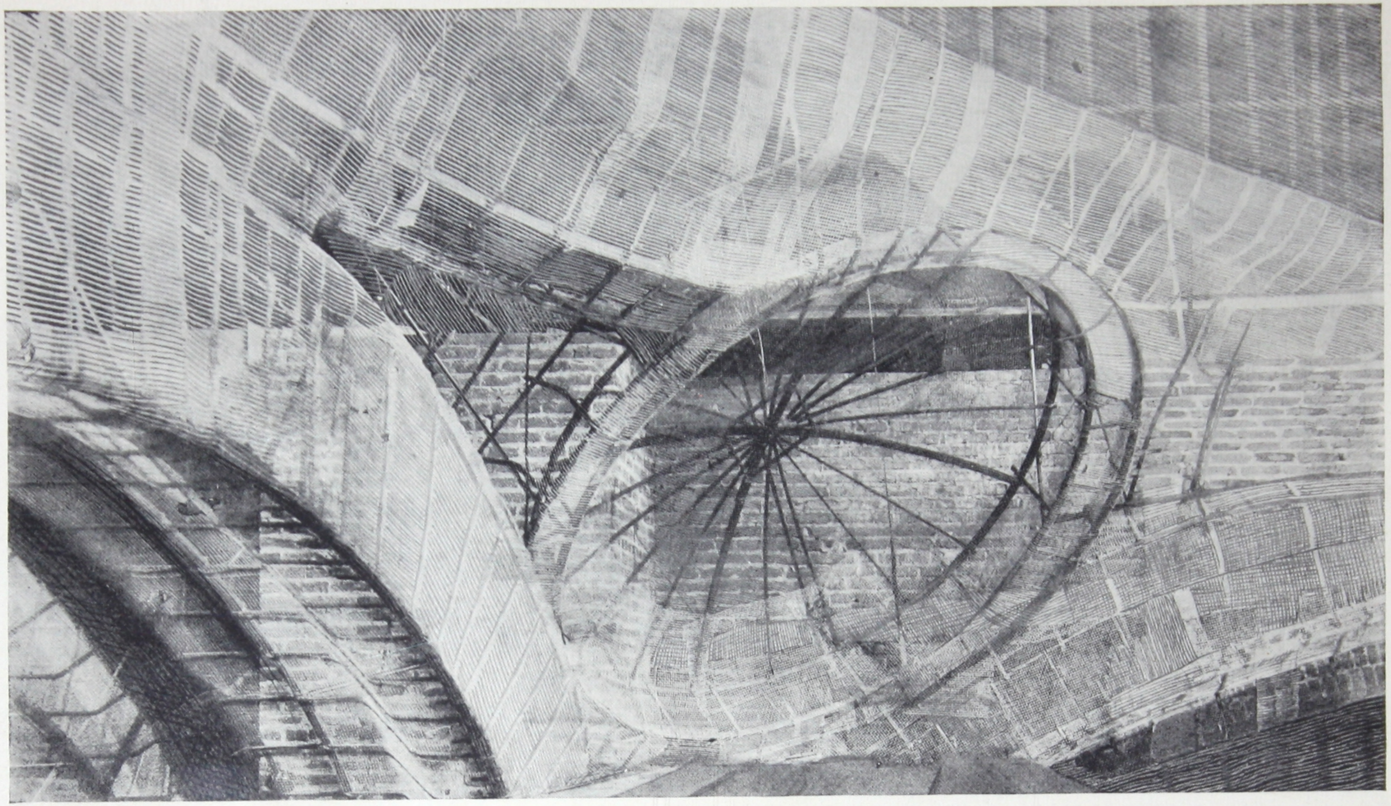
REPAIRING TERRA COTTA HOLLOW TILE FLOOR ARCHES WITH WIRE LATH

In the illustration is shown the method which was adopted in repairing the terra cotta hollow tile floor arches throughout the Union Trust Building, Baltimore, after the conflagration of 1904. Clips supporting a light steel frame, to which V-stiffened Clinton wire lath was laced, were attached to the beams, after which cement plaster was applied.

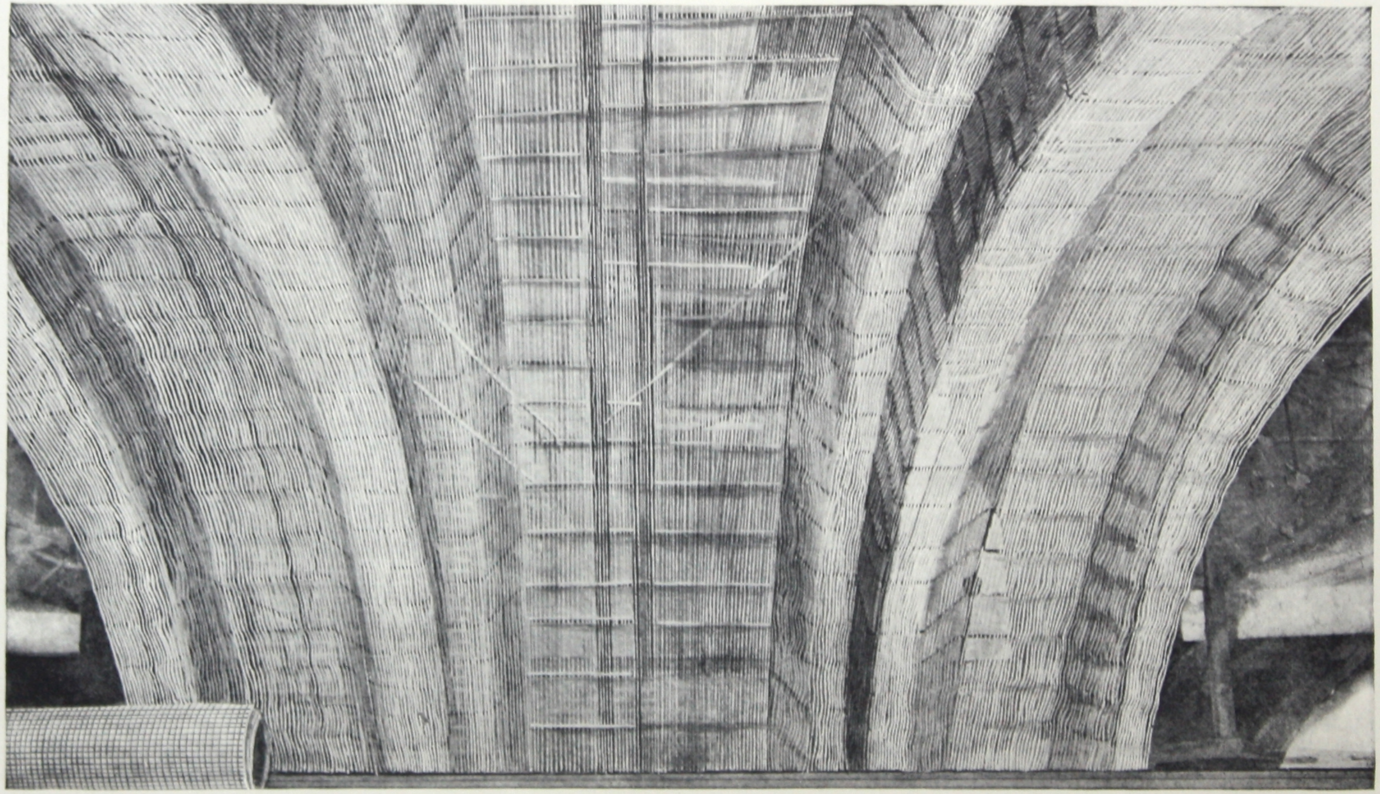
Architects and others interested in building construction will appreciate this method of repairing a terra cotta floor after it has been subjected to, and damaged by, fire. This is not only the one practical method of repairing such floors, but at the same time a better fireproof construction is obtained, due to the fact that only half as much of the tile remains and that is protected by the cement plaster.



METHOD EMPLOYED FOR ERECTING CLINTON FURRING AND LATHING IN THE WINGS OF MEMORIAL HALL, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MARYLAND



DETAIL OF CLINTON FURRING AND LATHING IN THE VESTIBULE AND MAIN STAIR HALL, CADETS' QUARTERS, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MARYLAND



CLINTON FURRING AND LATHING IN PLACE IN MEMORIAL HALL, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MARYLAND

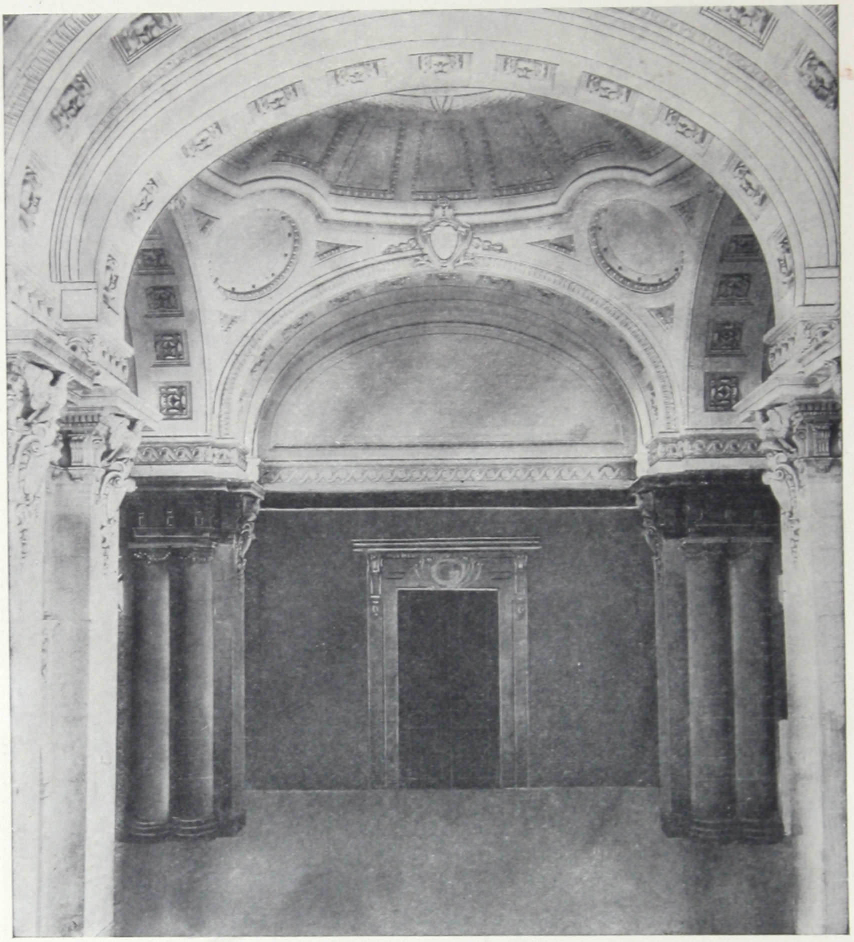
ERNEST FLAGG, NEW YORK
Architect

NOEL CONSTRUCTION CO., BALTIMORE
Builders

OLIVER & BURR
Contractors for Furring and Lathing

MAINE MEMORIAL CHAPEL, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MARYLAND

All Plaster Work done on the Clinton Wire Lath



ERNEST FLAGG
Architect

NOEL CONSTRUCTION CO.
Builders

OLIVER & BURR
Contractors for Furring and Lathing

ENTRANCE TO MEMORIAL HALL, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MD.

This is an interior view of the Maine Memorial Chapel, shown on page 33, and is considered to be, both in exterior and interior finish, one of the most dignified and beautiful buildings ever erected for the United States Government.

All Plaster Work done on the Clinton Wire Lath

ERNEST FLAGG
Architect

NOEL CONSTRUCTION CO.
Builders

OLIVER & BURR
Contractors for Furring and Lathing

ONE END OF MEMORIAL HALL, UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MARYLAND.

A comparison of the above picture, as well as that on the opposite page and the frontispiece, illustrating portions of the completed interior of the Hall, with the gossamer-like appearance of the furring and lathing employed, shown on page 30, will convey some idea of the inherent possibilities concomitant with the use of Clinton Wire Lath.

N. LE BRUN & SONS
Architects

V. J. HEDDEN & SONS CO.
Builders

METROPOLITAN LIFE ANNEX BUILDING,
11 EAST 24th STREET, NEW YORK

All Plaster Work done on the Clinton Wire Lath

INTERIOR OF THE MARYLAND SAVINGS BANK, BALTIMORE

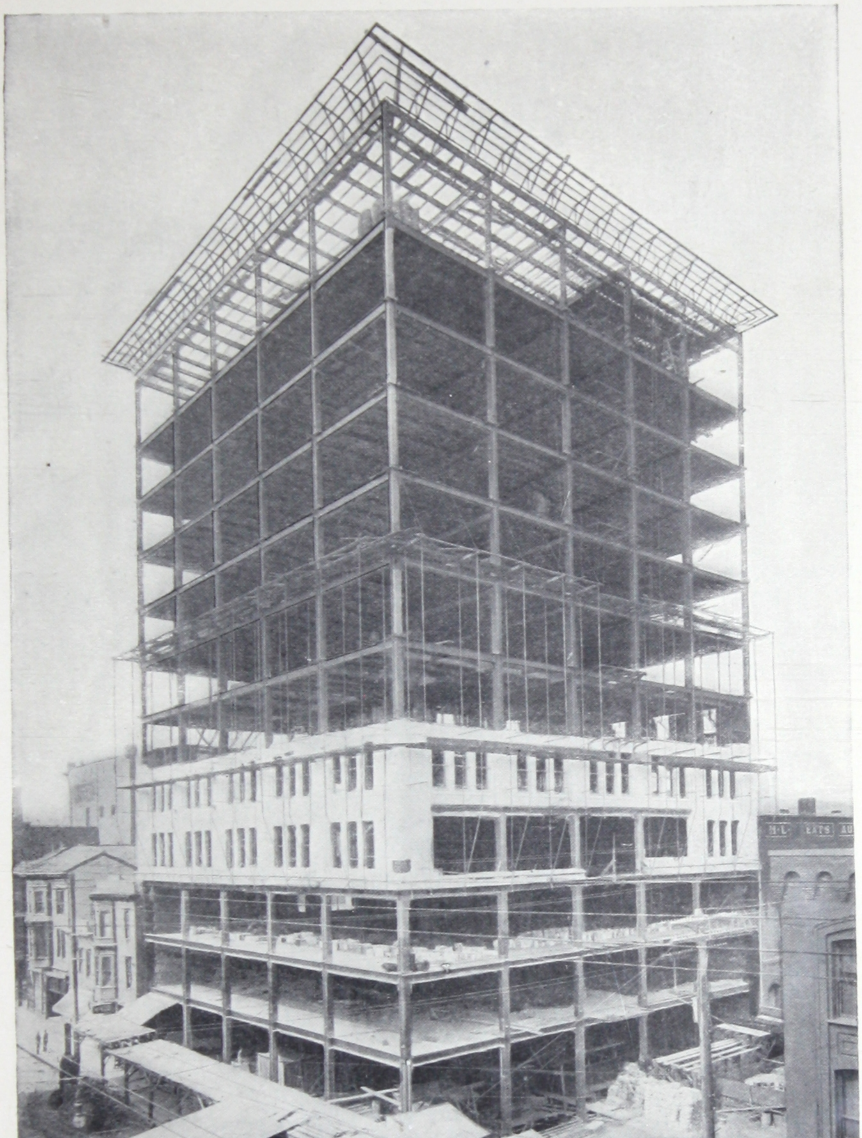
This is one of the most artistic bank interiors in the country and affords an excellent illustration of the adaptability with which Clinton Wire Lath lends itself to the most elaborate and intricate designs of the architect.

HEINS & LA FARGE
Architects

OLIVER & BURR
Contractors for Furring and Lathing

RESIDENCE OF MRS. E. W. BLISS, No. 9 EAST 68th STREET, NEW YORK

All Plaster Work done on the Clinton Wire Lath



BENJ. W. MORRIS, JR.
Architect

PACIFIC FIREPROOFING & CONSTRUCTION CO.
Contractors for Furring and Lathing

WELLS FARGO BUILDING, PORTLAND, OREGON

All Plaster Work is being done on the Clinton Wire Lath

MOWBRAY & UFFINGER—J. H. & W. C. ELY
Architects

E. M. WALDRON & CO.
Builders

NEWARK (N. J.) CITY HALL

All Plaster Work done on the Clinton Wire Lath

A portion of the interior of the dome of the Newark City Hall, showing the artistic effect achieved through the use of Clinton Wire Lath.

YORKE & SAWYER
Architects

NORCROSS BROS.
Builders

AMERICAN SECURITY AND TRUST COMPANY, WASHINGTON, D. C.

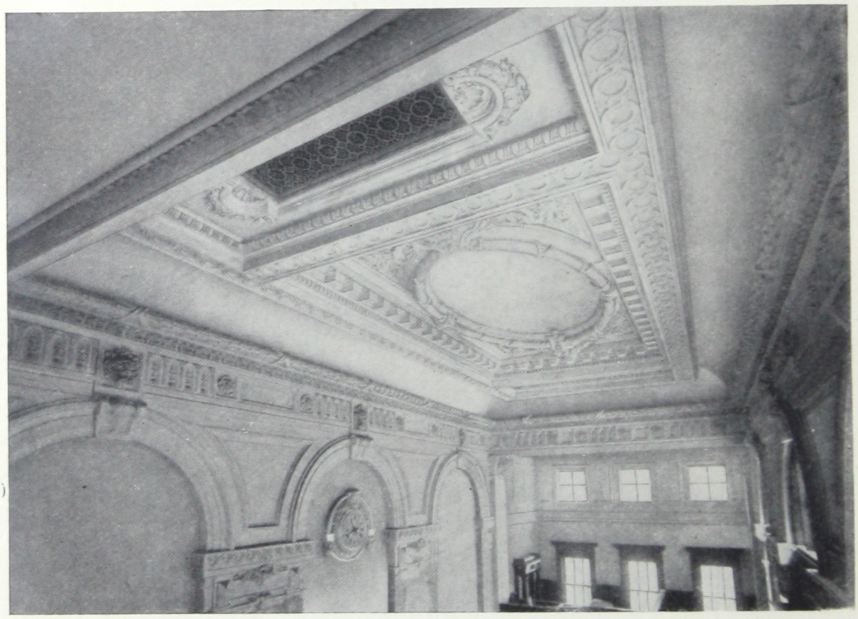
All Plaster Work done on the Clinton Wire Lath

The interior of the American Security and Trust Company's building, made as enduring as the exterior through the use of Clinton Wire Lath.

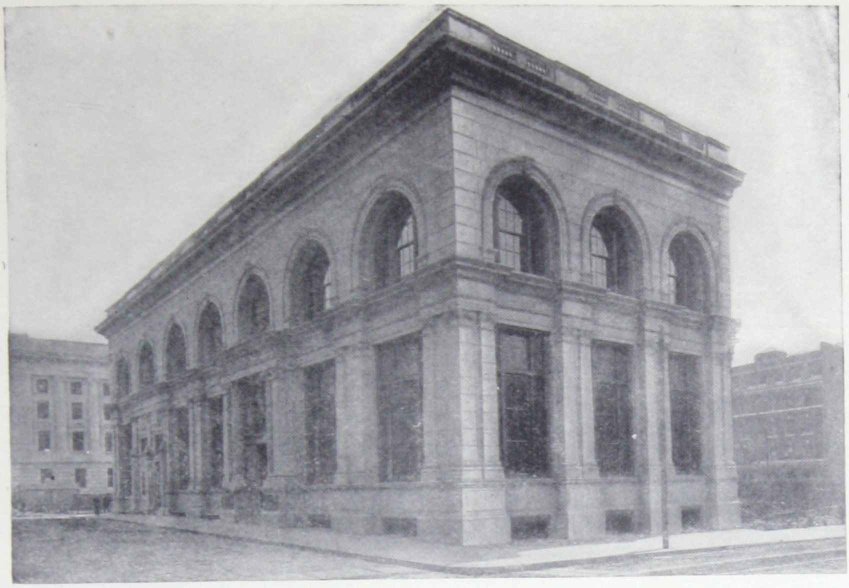
TAYLOR & KNOWLES
Architects

HENRY SMITH & SONS
Builders

THE NATIONAL MECHANICS' BANK, BALTIMORE
All Plaster Work done on the Clinton Wire Lath



Detail of ceiling of the Maryland Savings Bank, Baltimore. A striking illustration of the massive effect obtainable with Clinton Wire Lath.



PARKER & THOMAS
Architects

WELLS BROS.
Builders

THE MERCHANTS' NATIONAL BANK, BALTIMORE
All Plaster Work done on the Clinton Wire Lath

The massive ceilings in the Farmers' & Merchants' National Bank, Baltimore, made possible through the use of Clinton Wire Lath.

THE LINDGREN-HICKS CO.
Contractors & Engineers

HERBERT E. & HARTLAND LAW
Owners

PACIFIC FIRE-PROOFING & CONSTRUCTION CO.
Contractors for Furring and Lathing

FAIRMOUNT HOTEL, SAN FRANCISCO

This structure, considered one of the most beautiful hotels on the Pacific coast, was not quite ready for occupancy at the time of the recent conflagration, in the course of which it sustained considerable damage, mainly interior. Due to the poor column protection the columns throughout the building failed, letting down the floors in a great many places and naturally ruining all of the partition work. Expanded metal lath had originally been used, but this is now being replaced by Clinton Wire Lath in the new partitions, suspended ceilings, cornices, etc., which are being erected.

A List of Some
REPRESENTATIVE BUILDINGS
in which
CLINTON WIRE LATH
has been used

Showing the Varied Nature of Construction in which It Finds Application

OFFICE BUILDINGS

A. T. Stewart Building, New York,
O. B. Potter Building, New York,
Equitable Building, New York,
Metropolitan Life Annex, New York,
Mutual Life Building, New York,
"Sun" Building, New York,
R. & O. Goelet Building, New York,
Schermerhorn Estate Building, New York,
J. V. Farwell & Co. Building, Chicago,
Congregational Building, Boston,
Ames Building, Boston,
Alexander Building, San Francisco,
Call Building, San Francisco,
Atlantic Building, Washington, D. C.,
Cotton Exchange, New Orleans,
Cotton Exchange, Memphis, Tenn.,
Cotton Exchange, Savannah, Ga.,
Aetna Life Building, Hartford, Conn.,
Mutual Life Building, Seattle,
Wells Fargo Building, Portland, Oregon.

HOTELS

Holland House, New York,
Hotel Imperial, New York,
Hotel Savoy, New York,
Palmer House, Chicago,
Grand Pacific Hotel, Chicago,
Young's Hotel, Boston,
Parker House, Boston,
Adams House, Boston,
Belvedere Hotel, Baltimore, Md.,

Hotel Rennert, Baltimore,
Fairmount Hotel, San Francisco, Cal.,
Hotel Lombardy, Washington, D. C.,
Chalfonte Hotel, Atlantic City, N. J.

MUNICIPAL BUILDINGS

Metropolitan Board of Works, London, England,
Board of Education, New York,
Criminal Courts Building, New York,
Department of Docks, New York,
Department of Charities and Correction, New York,
Cook County Court House, Chicago,
Cook County Insane Asylum, Chicago,
City Hall, Newark, N. J.

HOSPITALS

Homœopathic Hospital, New York,
Sloane Maternity Hospital, New York,
Home for Incurables, Philadelphia,
Pennsylvania Hospital for Insane, Philadelphia,
Presbyterian Hospital, Philadelphia,
City Hospital, Newark, N. J.
City Hospital, Worcester, Mass.

THEATERS

Grand Opera House, New York,
Hudson Theater, New York.
Brooklyn Theater, Brooklyn,
Hyde & Behman's, Brooklyn,
Park Theater, Brooklyn,
Star Theater, Brooklyn,
Boston Theater, Boston.

RAILROAD AND FERRY BUILDINGS

Grand Central Station, New York,
New York Ferry Co., New York,
New York, Ontario & Western, New York,
South Division Railway Co., Chicago,
Chicago & Northwestern, Chicago.

EDUCATIONAL BUILDINGS

College of Physicians and Surgeons, New York
College of Physicians, Philadelphia,
Brooklyn Schools, Brooklyn,
St. Alphonsus School, Brooklyn,
Harvard Medical School, Boston,
Lamson Hall, Yale University, New Haven,
Sheffield Hall, Yale University, New Haven.

GOVERNMENT BUILDINGS

The Government Building, Dominion of Canada.
New Patent Office, Washington, D. C.,
Twelfth Regiment Armory, New York,
Post Office, Boston,
U. S. Custom House, New Orleans,
Cadets' Quarters, U. S. Naval Academy, Annapolis,
Maine Memorial Chapel, Annapolis,
Marine Engineers' Building, Annapolis,
Officers' Mess Building, Annapolis,
Normal and Agricultural Institute, Hampton, Va.,

RESIDENCES

William Astor, New York,
John Jacob Astor, New York,
Mrs. E. W. Bliss, New York,
C. F. Hoffman, New York,
Henry Hilton, New York,
W. H. Vanderbilt, New York,
Potter Palmer, Chicago,
Robert Garrett, Baltimore,
Chas. Crocker, San Francisco,
J. Gordon King, Newport, R. I.,
Gen. F. V. Greene, Newport, R. I.,
R. D. Winthrop, Westbury, Long Island,
Max Nathan, Yonkers, N. Y.,
Daniel Guggenheim, Elberon, N. J.,

BANKS

Manhattan Bank, New York,
Philadelphia Savings Bank, Philadelphia,
National Mechanics' Bank, Baltimore,
Merchants' National Bank, Baltimore.
Maryland Savings Bank, Baltimore,
Farmers' & Merchants' National Bank, Baltimore,
American Security & Trust Co., Washington, D. C.
First National Bank, Paterson, N. J.,

MISCELLANEOUS

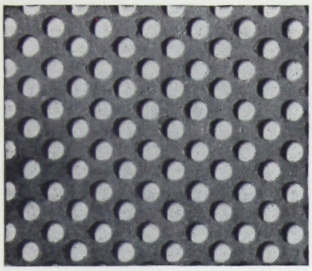
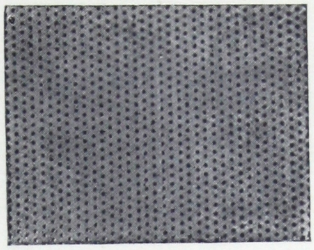
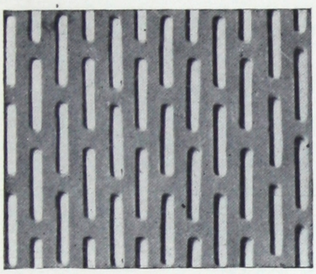
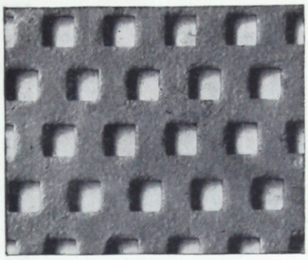
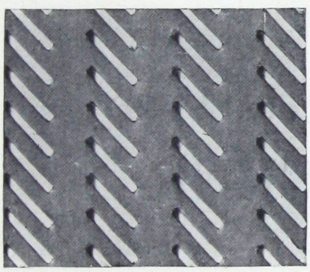
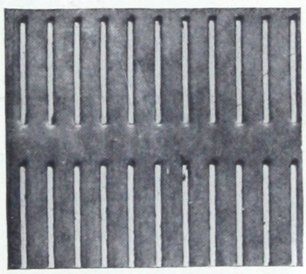
Union League Club, New York,
Arnold, Constable & Co. Warehouse, New York,
Marshall Field Warehouse, Chicago,
Art Museum, Boston,
Carnegie Library, Williamsburg, N. Y.,
Princeton Library, Princeton, N. J.

STANDARD WIRE GAUGES IN USE IN THE UNITED STATES

Dimensions of Sizes in Decimal Parts of an Inch

Number of Wire Gauge	American or Brown & Sharpe	Birmingham or Stubbs	Washburn & Moen Mfg. Co., Worcester, Mass.	Trenton Iron Co., Trenton, N. J.	G. W. Prentiss Holyoke, Mass.	Old English from Brass Mfrs.' List	Feet per Pound, W. & M. Gauge
000000	....	....	.46	....	....	....	1.78
00000	....	....	.43	.45	....	....	2.04
0000	.46	.454	.393	.4	....	.454	2.44
000	.40964	.425	.362	.36	.3586	.425	2.87
00	.3648	.38	.331	.33	.3282	.38	3.44
0	.32495	.34	.307	.305	.2994	.34	4.00
1	.2893	.3	.283	.285	.2777	.30	4.71
2	.25763	.284	.263	.265	.2591	.284	5.45
3	.22942	.259	.244	.245	.2401	.259	6.33
4	.20431	.238	.225	.225	.223	.238	7.45
5	.18194	.22	.207	.205	.2047	.22	8.81
6	.16202	.203	.192	.19	.1885	.203	10.23
7	.14428	.18	.177	.175	.1758	.18	12.04
8	.12849	.165	.162	.16	.1605	.165	14.36
9	.11443	.148	.148	.145	.1471	.148	17.24
10	.10189	.134	.135	.13	.1351	.134	20.70
11	.090742	.12	.12	.1175	.1205	.12	26.17
12	.080808	.109	.105	.105	.1065	.109	34.24
13	.071961	.095	.092	.0925	.0928	.095	44.64
14	.064084	.083	.08	.08	.0816	.083	59.17
15	.057068	.072	.072	.07	.0726	.072	72.99
16	.05082	.065	.063	.061	.0627	.065	95.23
17	.045257	.058	.054	.0525	.0546	.058	129.53
18	.040303	.049	.047	.045	.0478	.049	170.94
19	.03589	.042	.041	.04	.0411	.04	224.71
20	.031961	.035	.035	.035	.0351	.035	308.66
21	.028462	.032	.032	.031	.0321	.0315	369.00
22	.025347	.028	.028	.028	.029	.0295	483.09
23	.022571	.025	.025	.025	.0261	.027	606.06
24	.0201	.022	.023	.0225	.0231	.025	714.28
25	.0179	.02	.02	.02	.0212	.023	943.39
26	.01594	.018	.018	.018	.0194	.0205	1176.47
27	.014195	.016	.017	.017	.0182	.01875	1315.79
28	.012641	.014	.016	.016	.017	.0165	1492.54
29	.011257	.013	.015	.015	.0163	.0155	1694.91
30	.010025	.012	.014	.014	.0156	.01375	1960.78
31	.008928	.01	.0135	.013	.0146	.01225	2083.34
32	.00795	.009	.013	.012	.0136	.01125	2272.73
33	.00708	.008	.011	.011	.013	.01025	3125.00
34	.006304	.007	.01	.01	.0118	.0095	3846.15
35	.005614	.005	.0095	.0095	.0109	.009	4347.82
36	.005	.004	.009	.009	.01	.0075	4761.91
37	.004453	....	.0085	.0085	.0095	.0065	
38	.003965	....	.008	.008	.009	.00575	
39	.003531	....	.0075	.0075	.0083	.005	
40	.003144	....	.007	.007	.0078	.0045	
41	....	....	.0066	....	....	....	
42	....	....	.0062	....	....	....	
43	....	....	.006	....	....	....	
44	....	....	.0058	....	....	....	
45	....	....	.0055	....	....	....	
46	....	....	.0052	....	....	....	
47	....	....	.005	....	....	....	
48	....	....	.0048	....	....	....	
49	....	....	.0046	....	....	....	
50	....	....	.0044	....	....	....	

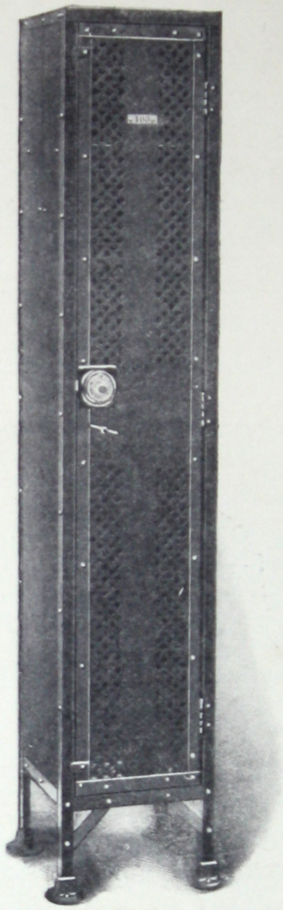
The gauges for wire shown in the above table are the same as those for sheet metal. Wire, however, of which Clinton Wire Lath is made, is drawn under a tensile strength of 60,000 pounds per square inch, while sheet metal, of which the various brands of metal lath are made, is only drawn under a tensile strength of 45,000 pounds.

CLINTON

PERFORATED METALS

For locomotive spark arresters, stone, coal and ore screens, wool washing and mill machinery, malt kiln floors, centrifugal machines and filter press plates for sugar and oil refineries, screens for fanning and threshing mills, etc. A special catalog will be sent on request.



THE CLINTON PERFORATED

METAL LOCKER

for

FACTORIES, OFFICES, SCHOOLS, GYMNASIUMS, WAITING ROOMS, HOTELS, ETC.

THE CLINTON
FIRE-PROOFING SYSTEM

In placing this system of fireproof construction before the public we base our claim to superiority over other systems on the fact that the Clinton Electrically Welded Fabric, which forms the basis of this system, establishes a continuous bond in the concrete and creates an actually monolithic structure.

Clinton Electrically Welded Fabric is made of the finest quality of close-fibered drawn steel wire. The cross wires, being welded to the carrying wires by electricity, are rigidly held in place and prevent the latter from slipping in the concrete. The weld is so perfect that it is impossible to detect it even by a microscopic examination of the point of intersection where the same has been exposed and burnished. In thousands of breaking tests the wire has broken at points other than the intersections in all cases. This effectually disposes of one of the arguments used against welded wire.

An eminent engineer in control of one of the largest operations in the United States decided to use Clinton Electrically Welded Fabric in preference to any other material on account of the excellence and strength of the weld. He had demonstrated theoretically that at each transverse or bonding wire there was in effect an arching of the concrete from wire to wire. The position he took has been justified because tests have demonstrated that the fixed point at the intersection has the effect of distributing the load along the lines of the transverse wires. At the same time, it increases the strength of the tension wires, due to the immovability of the welded intersection wires.

The 6 to 10 gauge fabric can be laid in lengths up to 300 feet, thereby forming a continuous bond for that distance. Heavier gauge fabric can be laid in lengths up to 60 feet, and where connected will be locked or hooked to the next sheet, where building requires more than one sheet in length.

The desirability of this method, as compared with a system in which lapped ends of steel fabric are necessary every few feet, will be readily appreciated. No entire collapse of any arch erected with Clinton Electrically Welded Fabric can occur unless the weight imposed is sufficient to strain and break all of the wires.

A serious objection where expensive decorations are used in fireproof buildings arises from the discoloring of walls and ceilings where the block construction is used. This never occurs where plastering is done on Clinton Wire Lath over ceilings, hollow or solid partitions and wall furrings.

A catalog describing and illustrating the Clinton Fire-Proofing System will be sent on request.

We have a large plant fully equipped with the latest
and most improved machinery for
the manufacture of

WIRE CLOTH

Woven Wire Fence

Electrically Welded Wire Fabrics for Concrete Construction, Etc.

Perforated Metals of all kinds

Hexagonal Netting

and

Wire Lath

Catalogs of any of the above lines sent on application

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Ixx